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The Bristol Medico-Chirurgical Journal

"Scire est nescire, nisi id me
Scire alius sciret."

SUMMER, 1939.

SOME RECENT ADVANCES IN OPHTHALMOLOGY.*

BY

ANTHONY PALIN, B.M., B.Ch., F.R.C.S.,

Honorary Assistant Surgeon, Bristol Eye Hospital; Senior Clinical Assistant, Royal Westminster Ophthalmic Hospital, London.

CONTACT LENSES.

History and mode of use.

Although it is only within very recent years that corneal contact glasses have become a practical proposition, the idea is by no means new.

As so few people have had an opportunity of seeing a contact lens, I should explain that this term refers to glass lenses which are worn inside the eyelids in direct contact with the eyeball itself. They are invisible to ordinary observation and indeed even to

* A paper read before the Bristol Medico-Chirurgical Society, 8th March, 1939.

close inspection, if it is not known that they are present. (Before a recent lecture to the nurses at the Eye Hospital I inserted contact lenses into my own eyes and let them each examine me, merely mentioning that there was something unusual about my eyes. Not one nurse realized that I was wearing contact glasses. And I once asked a London ophthalmic surgeon, well known as the author of a text-book, to examine a patient who was fitted with them. He completely failed to note that he had been examining the eyes through contact lenses.)

To revert to their historical aspect, it is interesting to find that in 1827 Sir John Herschel, brother of the Astronomer Royal, conceived the idea of using such lenses, although he was unable to carry it out. The first lens was made by Fick in 1887, and during subsequent years a few lenses, blown from molten glass, were made by Müller in Berlin; while at the same time Sultzer was working on contact lenses ground from solid blocks of glass. Nevertheless no really satisfactory clinical results could be obtained, and no further progress was made.

More than one hundred years after Herschel an important milestone has been passed, and now contact lenses can be obtained in stock sizes, or made to measure. Their prescription and fitting are matters of extreme precision and, in the case of those made to measure, involve a mould being taken of the eye and much time to ensure the accurate fit which is essential for comfort and efficiency.

Each lens is a half to one millimetre thick and has two segments—a central domed portion which lies next to the cornea itself, and a peripheral portion adjusted to the radius of curvature of the sclera. Any gap or irregularity between the front of the cornea and

back of the lens is occupied by normal saline. This gives an artificial anterior chamber of almost equal refractive index to that of the anterior part of an eyeball; so that the refraction of all visual rays now takes place at the smooth anterior surface of the contact lens and not at the cornea.*

Insertion and removal of the glass is achieved by means of a special rubber sucker, or in some cases direct by the fingers. At the first trials, to give confidence and prevent blinking, it is usually necessary to anæsthetize the eye with holocaine or cocaine.

There are two distinct sets of cases in which this type of glass is used. In the first it functions as a protective agent and in the second it is used for optical effects.

A. *As a protective medium.*

In this capacity the contact glass has at present small but valuable scope. One may sub-divide this group of patients into: (i) Those who use contact glasses to avoid certain hazards, and (ii) Those whose corneae need protection for pathological reasons.

(i). The former class is comprised of those whose occupations or pastimes may involve accidents in which ordinary spectacles might be broken. Such are, to mention a few, airmen, racing-drivers, footballers, skiers and those who shoot or hunt.

One may digress for a moment here. It is not perhaps easy to realize that a glass in contact with the eyeball is, if broken, less likely to cut the eye than the glass in an ordinary spectacle frame. Sir Stewart Duke-Elder has ascertained that this is the case, and I have devised an experiment to prove it.

* In the case of the glasses made to measure there is no artificial anterior chamber, there being complete capillary cohesion between the cornea and the inside of the contact lens.

A sheet of rubber is fixed in a box a short distance behind a sheet of glass. Breaking the glass with a hammer results in several fragments of glass being driven through the rubber. In the second set of conditions the glass and rubber are in contact. In the latter case breaking the glass results in fragmentation but no particles pierce the rubber.

An example of protection occurred quite recently when a motorist involved in a crash had his eyelids badly cut by broken windscreen glass. By virtue of the contact lens he was wearing, however, the eyeball completely escaped injury.

(ii). The class of patient whose cornea needs protection for pathological reasons mainly comprises those who have intractable corneal conditions, such as relapsing keratitis—especially of the neuroparalytic type. This includes herpes ophthalmicus, cases of facial neuralgia which have had Gasserian root section or alcohol injection, whose corneal sensitivity does not return, conjunctival pemphigus, and some cases of old keratitis from mustard gas. These cases present a very real problem, as those of you who have had the care of such patients will know. The cumbersome protective goggle which is so often necessary can be replaced by a much neater article in the form of a contact glass.

Surgical ophthalmology has also found a use for these lenses in applying them after corneal grafting operations to maintain the transplant in correct position in the corneal bed. This method, however, is less generally adopted by ophthalmic surgeons than the use of overlying sutures or a conjunctival flap.

An interesting protective use exists for those rare individuals of marked albino type, and those with partial or total congenital absence of iris, where a

constant source of misery is photophobia, due to lack of uveal pigment. This is dealt with by having the central or peri-central portion of the contact glass tinted sufficiently to cut down the admitted light to the individual's tolerance point.

Mention of tinted contact lenses reminds me of a novel use to which one was recently put in America. A wanted criminal, after much effort on the part of the police, was at last — they thought — apprehended. However, the criminal's dossier showed that he had blue eyes. This man had brown eyes, and, after police and medical examinations, was about to be released when suspicion became so strong that his eyes were re-examined by an ophthalmic surgeon. It was then found that he was wearing brown-tinted contact lenses! The gaol kept its prisoner and the Police Museum acquired an unusual exhibit.

B. *Use for optical effects.*

The outstanding success of the contact lens is in keratoconus (or conical cornea). In this condition there is a degenerative thinning of the centre of the cornea which causes a bulge, and a degree of irregular astigmatism which cannot be corrected with ordinary glasses and which produces distortion in the whole field of vision. This means that in many such cases the top letter of the ordinary Snellen test-type cannot be read at three yards even with the best glasses. A contact glass will often allow all the letters on the chart to be read at the full distance of twenty feet.

Myopia is another type of refractive error in which sufferers may be grateful for a contact glass, although vanity is often the urge which leads to them. Actresses, for example, whose "appeal" would be reduced by wearing glasses, and who would blunder about on the stage without them, are glad of this invisible aid to

perfect vision. And I know of a very short-sighted woman, who, about to be presented at Court, could not suffer to reveal to the general gaze her much-photographed face in the powerful lenses she needed to turn her beautiful but vacant gaze into an accurate regard. She obtained contact lenses for fear of tripping over the edge of the royal carpet. Apparently, however, she wore them on that occasion only. Vanity aside, the high myope may find contact glasses of very special help, for example when bathing, as they are no more affected than the eyeball by drops of water. The short-sighted surgeon also (who, one hopes, is not actuated by considerations of vanity) may find them of great advantage in operating, since these lenses do not become steamy.

Unilateral aphakia due to removal or traumatic destruction of one lens, usually leads to the affected individual not being able to see accurately with both eyes at the same time. The reason for this is that the powerful convex lens which he now requires, and which in a spectacle frame is ordinarily about twenty millimetres in front of the optical centre of the eye, produces marked magnification in that eye and thus gives diplopia. The contact glass, worn so close to the optical centre, does not give any magnification and allows the individual once again to have accurate binocular vision.

Disadvantages.

It must not be thought that contact glasses are Utopian in character. Unfortunately there has recently been a spate of publicity, not only in the more sensational papers but also in quieter periodicals, and broadcasts, too, have made a contribution. Like other news-value subjects such as improving the quality of cock's combs and bringing down testicles, contact lens

potentialities have brought innumerable requests for treatment from totally unsuitable cases. The benefit to the individual concerned must be so considerable as to render trivial certain drawbacks which would trouble most of us.

The average person does not find the lenses easy to insert and if an air-bubble is left between the cornea and the lens, the latter might quite likely drop out, and further, the correct optical effect is abolished. Cocaine or holocaine has to be used until the patient gets used to the new sensation, and in some cases even after that, for the lens is undoubtedly a conjunctival foreign body. Many patients can never get accustomed to the lenses and even among regular wearers tolerance to wear varies from two to twelve hours, at the end of which time the lenses must be removed and washed and the eyes allowed a little time to recover before reinsertion.

Not the smallest question is that of expense. The ready-made contact lenses of Zeiss cost five pounds per lens. The made-to-measure ones need so many fittings to grind to the correct thousandth of an inch that they may ultimately cost as much as forty-five pounds a pair. They can be insured, however, and in any case they will not break unless they are dropped on a very hard surface.

In spite of the drawbacks contact glasses will increase in use, although of course they are never likely to become of universal application. The big points in their favour are that unlike ordinary glasses they do not at all restrict the field of vision and they move with the eyeball. Furthermore, being so close to the eye they produce no distortion, and in selected cases give a degree of visual improvement unobtainable in any other way.

DETACHMENT OF THE RETINA.

This condition is well worthy of consideration under the heading of Recent Advances, since a new treatment has entirely revolutionized the outlook. There are two main groups of detachment cases ; first, the exudative type, associated with diseases such as syphilis, tubercle, nephritis, venous thrombosis and neoplasm ; and secondly, the non-exudative type, due to inflammatory and degenerative conditions in the choroid such as myopia, and direct or indirect trauma. There are also a few cases in this group which fall under the designation "idiopathic." The treatment of the first group is essentially medical, except obviously in the case of neoplasm, where excision of the eye is indicated.

It is the second group that I want to discuss, for here a new surgical technique has turned a virtually untreatable disease (the failures formerly amounted to 98 per cent.) into one with a reasonable prospect of cure. In competent hands about 30 to 40 per cent. of these cases may now expect a good result.

Investigation and diagnosis

It is important that every case of detachment be treated as a real emergency, since every hour that the patient spends out of bed after the onset increases the detachment and reduces the chances of cure. A review of signs and symptoms may assist in early recognition.

The first symptom is nearly always a major degree of loss of sight, although this may have been preceded by the sensation of flashes of light or streaks. The patient may also complain of "a curtain coming across the eye." The differential diagnosis of sudden loss of sight is fairly simple. Having excluded hysteria and long-standing blindness in one eye (which may

only be suddenly discovered by accidental covering of the good eye) there are three painless causes of sudden blindness and one cause with pain.

The painless causes are :—

(i). Vascular accident, usually retinal hæmorrhage, embolism or thrombosis and (rarely) spasm of retinal arteries. Occasionally a retro-ocular or intra-cranial hæmorrhage may have to be excluded, though this is generally easy on account of other signs ;

(ii). Acute retrobulbar neuritis, with its characteristic pupil reaction, and pain on movement of or pressure on the eyeball ; and

(iii). Retinal detachment.

The painful cause is, of course, acute glaucoma, which should be obvious on account of the raised tension, hazy cornea, semi-dilated inactive pupil, and, usually, general prostration due to the severe pain.

As regards the signs of detachment, it is generally possible to see with the ophthalmoscope, preferably through the dilated pupil, a greyish area of retina which lies in corrugated folds and appears to balloon forwards, requiring a stronger plus lens to focus it than is required by the adjacent retina. The arteries and veins are markedly tortuous, darker in colour than normal, and appear to be contracted. The other classical sign is loss of an area of the visual field which is easily charted out on the perimeter.

Thorough examination makes a big difference to the technique decided upon and to the prognosis. The possibility of a neoplasm (which is usually a melano-sarcoma of the choroid) must be eliminated, and its absence is suggested by negative trans-illumination, normal intra-ocular tension, the presence of a retinal hole and the history of onset. One must

also make certain that the condition is not part of a metabolic or vascular exudation.

The tedious part of the investigation is the search for a retinal hole or tear, for unless this is closed, fluid will again seep through between the choroid and retina and cause a recurrence. Dark-room inspection under full dilatation of the pupil is carried out with a focussed beam from the ophthalmoscope, and particular attention is paid to the periphery of the retina near its forward attachment to the ciliary body, since the majority of holes occur nearer the anterior than the posterior limits of the retina. When no hole or tear of the retina from its insertion can be found, puncture of the sclera with withdrawal of sub-retinal fluid may allow the retina to sink back on to the choroid and reveal one or the other.

Technique of treatment.

The principle of modern treatment is to drain off the sub-retinal fluid and to produce an aseptic reaction in the sclera, choroid and retina by carefully graded surgical diathermy, in such a way that when the retina falls back into place all three layers will adhere together. The area of detachment is marked out on a chart and the sites of any holes or tears are recorded to the precise millimetre. Under retro-bulbar novocaine the required area of sclera is bared, and muscles retracted or temporarily divided if necessary. With the aid of the chart the hole is marked on the outside of the sclera with methyl violet, and this area is then treated by twenty to sixty diathermy applications by special applicators, some of which make minute perforations in the sclera. A current of forty to eighty milliampères is used for three to eight seconds at each application.

When the sclera has been treated to the exact degree required over the appropriate area, the globe is punctured and the sub-retinal fluid allowed to drain off. This is usually done by cautery puncture or by trephining. The situation and effect of the process may be checked throughout by the ophthalmoscope, the treated areas appearing as dead-white patches in the retina.

After closure of the wound the patient is put straight back to bed and has to remain almost motionless and recumbent for upwards of three weeks. In satisfactory cases the whole retina becomes and remains firmly attached to the choroid and sclera, and normal vision is recovered over the full field. The long convalescence is tedious, but is well justified by the good results that one can now obtain.

ORTHOPTICS IN THE TREATMENT OF SQUINT.

When about thirty-five years ago Claud Worth devised his first amblyoscope he had in mind many of those principles which to-day constitute the new science of Orthoptics.

Briefly to define orthoptic investigation and treatment, one may say that it is a branch of ophthalmology, devoted mainly to squint and partly to certain types of eye-strain, in which considerations of ocular function take precedence over all else. Until recent years, and even to-day in some quarters, the standard by which squint treatment has been judged has been a cosmetic one. If the eyes appeared straight, then both patient and ophthalmologist were satisfied. It was the tragedy of such a doctrine that the patient's normal appearance concealed from the world, and often from himself, the fact that he was usually almost blind in one eye and seldom had central binocular vision.

Such a person would lack all sense of stereoscopy, the most important faculty for judging distance and dimension. In growing children lack of central binocular vision has often been found to be the reason for their being hopelessly bad at games.

Many people ask one why an eye that has squinted becomes "lazy," as it is called by the laity. The mechanism is purely a compensatory one. An individual who has the visual axis of one eye deviated from normal must ordinarily suffer from diplopia. The effect of double vision is extremely uncomfortable and the brain in most cases suppresses the vision in the squinting eye. If this happens during the early years of life, when retinal perception is still being developed, the faculty of sight diminishes in the eye concerned. Thus it is that one so often finds in later years an eye with no discernible abnormality whose function and vision are defective. The object of orthoptics, like orthopædics, is primarily to restore function.

It must not be thought that this is a mode of treatment which replaces all existing procedures. What is claimed for it is that, after the correction of refractive errors (which is a preliminary in any case of squint) it will cure many cases functionally and cosmetically without operation. And in many other cases, by pre- and post-operative exercises, it will render an operative result more certain and permanent and will restore normal function.

In the past the average case of squint was left until puberty or later so that it could be operated on under local anæsthesia, which explains why one sees so many squinting adults and young people about to-day. The average ophthalmologist thus took little or no interest in function and contented himself with

surgically adjusting the eyes as straightly as possible: and after the operation everyone would say it was a beautiful result. The important point is that not only might the vision in one eye remain grossly reduced—perhaps to 1/60—but also the two eyes were probably never used together. On the other hand, if the retina has been properly stimulated on orthoptic principles some of the vision will return (perhaps even all of it) and binocular function may be restored.

Types of cases suitable.

Several points have to be taken into consideration since many cases are quite unsuitable. For example, definite paralysis of one of the external ocular muscles will prevent useful results being obtained unless the paralysis is very slight or due to a recent injury.

Marked amblyopia presents a difficulty, unless it responds well to occlusion of the better eye. In general, occlusion should be carried out until the vision in the lazy eye is equal or nearly equal to that in the normal eye, before attempting orthoptic exercises.

In any case treatment is not feasible unless the squinting eye has, or can acquire, a vision of at least 6/18. Loss of central fixation is a contra-indication unless it is associated with what is called false projection. This is a condition resulting from long-standing deviation of an eye with development of a higher grade of vision in that area of retina immediately opposite the entering rays of light. The condition is sometimes badly described as " false macula." Lastly, it is no good for a child to start treatment unless it can come regularly for a minimum of two visits a week, and it must be at least four years old, unless it is highly intelligent.

Principles of treatment.

These vary somewhat in different cases. In the unilateral concomitant convergent type, which is by far the commonest, the first two stages are to correct any error of refraction (using a mydriatic) and to abolish or reduce any amblyopia by covering the good eye for two months or more. Subsequent stages —apart from operation if it should be necessary—are carried out with various orthoptic instruments which I will shortly describe. Most of them make use of pairs of lantern slides or illuminated pictures.

The third stage is abolition of false projection. Unless this is done, quite good function may be restored, yet the eye will remain deviated because it has accustomed itself to seeing best with an eccentric or non-macular area of the retina.

The fourth stage consists in the abolition of suppression with establishment of simultaneous perception, which is the lowest grade of binocular vision. The satisfactory attainment of this stage is marked by the patient having conscious diplopia, and, distressing as it may sound, this opens the gate to big advances.

The fifth stage is the development of the fusion sense. Here one wants to teach the patient to superimpose two images which, though similar, are not identical. The principle is to encourage the patient to see the complete picture. If he is suppressing vision in one eye, parts of the picture will fade out. This may be difficult or impossible in some patients suffering from a congenital defect of the fusion sense, presumably due to an error in their cortical control. In any case orthoptic treatment is the only method likely to re-establish it.

The sixth and last stage is the cultivation of

stereoscopic vision, which is the highest grade of binocular vision.

If the patient can be successfully taken through all this there is a good chance, unless the squint is very marked, that he can be cured without operation. If he should require an operation, as for example in cases where there is a rigidly contracted muscle, the treatment will be of great value in giving him the necessary stimulus for binocular vision. This will make him keep his eyes straight and avoid that unfortunate sequel of so many squint operations—recurrence of deviation.

Orthoptic treatment in non-squinting cases.

In this highly civilized and somewhat neurotic age, ever-increasing numbers of adult patients present themselves with vague ocular symptoms, and are found to have little or no error of refraction. About a quarter of these cases have either :—

(i). An error consisting of external ocular muscle imbalance, or

(ii). An inadequacy of convergence amplitude for close vision.

In the first group the horizontal errors, *exophoria* (usually found in myopes), and *esophoria* (usually found in hypermetropes), are the most common and imply a tendency to convergent or divergent squint respectively ; but this is only revealed by some such test as covering the eyes with red and green glasses, or by using the Maddox rod, when the deviation at once becomes apparent. The vertical error, hyperphoria, and the torsional error, cyclophoria, although rarer, are more often the cause of symptoms. Hyperphoria and cyclophoria occasionally give rise to the interesting and often misdiagnosed condition of ocular torticollis, the characteristic feature of which is an upward

deviation of the contra-lateral eye on looking to the side of the head-tilt. Unlike ordinary congenital torticollis, it generally causes the chin to be tilted down and turned to the same side. The mechanism is most frequently due to a congenital paresis of one superior rectus which results in overaction of its synergist in the other eye, the inferior oblique.

In the second group, inadequate convergence is often seen in elderly people, apparently associated with loss of accommodation ; but it is mainly between the ages of fifteen and thirty-five that symptoms occur, either as a congenital defect of binocular control or as the result of mental or physical fatigue states.

All these errors may usually be treated—and about 80 to 90 per cent. of them cured—by appropriate orthoptic exercises. It is of interest, too, that the Air Force ranks them as important as errors of refraction, for it is just these defects which may cause a pilot to make bad landings. Of them all, ocular torticollis is the least amenable and usually requires a myectomy of the overacting inferior oblique.

Chief orthoptic instruments.

Synoptophore—The most generally used muscle and fusion training apparatus, equipped with pairs of slides such as the lion and cage, the two rabbits (one with flowers and no tail, and the other with tail and no flowers) and ordinary stereoscopic pictures.

Myoscope.—A device for throwing two fusible pictures on a screen and giving exercising movements for any muscle desired.

Cheiroscope.—A drawing instrument to stimulate simultaneous perception, usable at home by intelligent children, in which a picture seen by one eye is, after relaying through the brain, projected by the other eye

in such a way that the child is able to "trace" it on blank paper.

OTHER ADVANCES.

Corneal Grafting.—One of the most interesting of all advances is in the realm of corneal grafting, recently described to this Society by Mr. Tudor Thomas, of Cardiff.

In general the most satisfactory patients are those with grossly defective sight in both eyes, due to old interstitial keratitis or conditions such as ophthalmia neonatorum or burns which have produced widespread corneal opacity. During the past year this operation has been successfully performed on several occasions at the Bristol Eye Hospital.

Colour Photography.

Colour photography of the fundus with the specially designed Nordenson camera has now rendered possible the most beautiful and accurate records of retinal abnormalities and disease, and these have of course the virtue of indisputable comparability.

Prosthesis.

Prosthesis work has now reached a very high standard. The examples made by a well-known optical firm in London are perfectly soft and plastic, yet they contain no rubber, and once the original cast has been made further copies can be ordered at any time in the sure knowledge of perfect fit, colouring and invisibility. In ophthalmic surgery they are mainly used after exenteration operations for neoplasms, when the eyelids have been removed and the whole orbit cleared out.

Spectacles.

The problem of glare has now resulted in the invention of polarising spectacles. Unlike ordinary

tinted glasses they do not exert their effect by cutting down the light intensity but, under ordinary conditions, actually polarise the light. This action is of practical importance since most (though not all) glare in nature consists largely of light which has become plane-polarised by reflection; and it is this discomforting part of the light which can be re-polarised and thus eliminated. Salmon fishermen will be interested to know that, thus equipped, it is possible even through the most glinting water to get a clear view of the fish they want to take home.

The trials of prolonged recumbency have now been catered for at the request of the orthopædic surgeons. You may henceforth lie supine in your plaster jacket and comfortably read your book while gazing towards the ceiling or the sky as it may happily be. This is achieved by prismatic bed-spectacles which allow the book to be held on the chest at an angle of 90° from the direction of the eyes.

I scarcely like to end on a morbid note but think you would like to see gas-mask spectacles. They are of importance in that ordinary spectacles are not allowed (for safety's sake) to be worn with the civilian respirator. An attachment is required for fixing special glasses on the outside of the mask. In the case of the Service and Duty types of respirator glasses may be worn inside, but here again they must be of a special design with flat side pieces.

SOME MEDICAL CONSIDERATIONS OF SPORTS AND GAMES.

BY

J. E. LOVELOCK, B.M., B.Ch.,
Olympic Champion and World Record Holder.

IN this short article I wish to emphasize a few points in the application of medicine to sport and games, points which are or should be well known to every doctor, but which tend to be overlooked because disease is more often in the mind of the doctor than is health.

The disinclination of clumsy and inexpert children to take part in organized physical exercises, games and athletic sports is one which every person interested in young people's health and welfare is constantly meeting. Of recent years I have found it in all grades of society and among all ages of children, whether it is among schoolchildren in the various types of schools, State or Public, or among the members of boys' clubs and similar institutions, particularly in the poorer districts of our large cities. This self-consciousness can largely be dispelled by an enthusiastic sports master or games adviser, but it is mainly to the medical man that the more careful of these physical fitness experts will appeal for help and advice. It is the family doctor, the school medical officer, and the medical adviser to the club, who can so often persuade the child or young adult, poorly blessed by nature as

far as his physique is concerned, that by steady effort he can make his perhaps malformed body into a comparatively normal and healthily active one. But in order to do that adequately the medical man must have some good understanding of the essentials of physical movement, of its place in the raising of the general bodily health, and above all, must be prepared to treat the children, not as patients, with attention focused on disease or potential disease, but as living thinking human beings aiming at getting the best out of their bodies and their minds.

It is important to lay stress from the beginning on the obvious and essential association between the mental and the physical sides of sport. All forms of athletic sports and games must appeal to the mind and to the imagination of the player, and above all in the case of the less expert child, for if he or she can be sufficiently interested to forget self-consciousness, in time self-confidence will lead to steady improvement in physique.

The doctor can do a great deal to foster self-confidence by assuring the youngster of his ability to take part in sports and games which are suited to his capacity. The doctor is the best judge of what sports and games are suitable: it then rests with the enthusiasm of the sports master or games coach to carry on aided by periodic encouragement and support from the doctor.

When we come to the more directly physical medical side, I want particularly to emphasize the importance of careful routine examination of all young people taking part in sport, so that should any abnormality be found its significance can be assessed and advice given as to the type and degree of strenuousness of sport suitable for each case. Periodic examinations

should certainly be made every term of schoolchildren; others undertaking strenuous competitive sport should have similar routine examinations made at least twice a year. Then attention can be given to various minor troubles such as diseased tonsils or bad teeth, which in themselves are relatively harmless but can lead to a serious undermining of the general health. Gross postural defects and skeletal deformities come into the domain of the doctor, whose advice is indispensable to games masters and coaches.

This brings me to the question of general health in sport. Too many people who wish to take part in games will not realize that good general health is the basis of success in any game. They tend to forget that before any one part of the body can put out its best performance the whole body must have its threshold of general health raised. It is the duty of the doctor to explain, particularly to the younger participants, the essential wisdom of playing different forms of games and sports in order to develop the whole body evenly. Most schoolchildren are rightly discouraged by their games masters from too early attempts at specialization: but in these days there is a tendency amongst the young to concentrate only on one or two sports to the exclusion of all others and to the detriment of their own general development. It should be the aim of games to develop personality and character, poise and self-confidence, symmetrical and well-controlled bodies as well as soundly balanced minds. The doctor is frequently consulted about the details of general fitness—such as the amount and type of exercise, diet, food and drink, alcohol and tobacco and their place in sport, massage and baths, and a host of similar points. He must have his own ideas clearly defined, and must be a good enough

physiologist to explain to both participants and coaches the scientific reasons for his advice, for in these days the young are very critical and by no means ready to accept advice blindly. He must be able to explain to them just why exercise in moderation improves the health, why muscles increase in bulk and even more in utility with use, why alcohol, though apparently a stimulant, is in fact a physical depressant, like tobacco. He should be able to advise on the much over-worked subject of diet, of which many people make an unnecessary fetish : simple health rules on food should include the need for fruit and vegetables, milk and butter, the importance of small, more frequent meals well masticated taken at regular times of the day, and never just before or just after violent exercise. He should emphasize the essential importance of sleep in order that the body tissues, fatigued by exercise during the day's activities, may have an opportunity to recover, and the growing body the best chance to fill out. This is a subject to which the average person does not give enough attention. Eight hours' sleep a night is a good average, but young, growing people need much more. Regular hours of sleep are as necessary as regular exercise and regular meal times, while the importance of a quiet, well-ventilated room in the production of restful sleep is only partly realized by most young people. Hosts of other general considerations are certainly necessary for the doctor who realizes that his work among young people and especially in sports and games is mainly that of a practitioner of preventive medicine.

Many of the deformities, the injuries, or even just the disappointments and failures which ultimately come his way could be prevented by careful periodic examination, instruction and prophylactic treatment.

To quote Sir E. Kaye Le Fleming in his foreword to Dr. Griffin's *The Scientific Basis of Physical Education :* "The G.M.C. rightly insists on the teaching of medical science from the preventive aspect, yet the amount of attention given to this exhortation will, in the opinion of not a few, amount to little more than lip service so long as our great health services remain outside the purview of the medical student." It is this preventive aspect which I consider most important in games and sports, and of essential importance in the case of those who are physically handicapped or merely shy and backward. It is the doctor's duty to the community to do his best to raise the general health of that community, and in no one way can more be done than by early attention to children and young adults before they have seriously started on their games and sports. Failures and injuries there are bound to be, varying from mild ones, such as mere stiffness and soreness on taking to unaccustomed movements, to serious physical ones, such as strains, pulled muscles and tendons, or from minor mental ones, such as shyness and lack of adaptability and inability to mix normally in sport with other children, to major disturbances such as staleness and even nervous breakdowns in those engaged in intense competitive sport. These fall outside the scope of this article, for they come within the domain of accepted medicine. Excessive stiffness, like strains and pulls and other serious injuries, however, is often due to some unsuspected septic rheumatic focus : shyness and inability to mix, like early staleness or nervous exhaustion, are often due to mild neuroses, whether intrinsic constitutional defects or extrinsic ones due to conflict with environment. A careful physical and mental assessment of every participant would, in a large measure, prevent

many of the minor tragedies which are so often seen amongst young people. Prophylaxis is the only satisfactory remedy for ills, mental or physical, in the field of games and sports. Treatment of the fully developed disease is too often mere patching up of damage.

The general practitioner in contact with the very young has the big opportunity of keeping his charges from being ill. He must not become so obsessed with disease and potential disease that he forgets how to deal with healthy individuals as living and thinking human beings.

SPASMODIC RHINORRHŒA.*

BY

E. WATSON-WILLIAMS, M.C., CH.M.,

Surgeon-in-Charge, Ear, Nose and Throat Department, Bristol Royal Infirmary; Clinical Lecturer in Diseases of the Ear, Nose and Throat, University of Bristol.

THE condition to which I wish to direct attention is known by a variety of names—catarrh, coryza, rhinitis, rhinorrhœa or nasal hydrorrhœa, qualified as spasmodic, paroxysmal, intermittent, periodic, æstival, idiopathic, vasomotor, nervous, and, of course, allergic. As some of these names indicate, the characteristic symptom is an intermittent watery discharge from the nose. In addition there are often attacks of sneezing, irritation and obstruction of the nose, and lachrymation. These phenomena are, of course, seen as perfectly normal, physiological reflex reactions to any intranasal irritation; and they may be provoked by other stimuli such as bright light. An exaggerated response is probably more common than is usually supposed, being regarded, especially in winter or if the subjects are children, as "a slight cold." It is only when the attacks are sufficiently severe or prolonged that they are promoted to the dignity of disease.

The frequency of the attacks is very variable:

* Introduction to a discussion at the Bristol Medico-Chirurgical Society on Wednesday, 12th May, 1939.

it is easy to distinguish groups in which they are:—

(*a*) Quite irregular
(*b*) Perennial
(*c*) Periodic or seasonal.

Of the third class hay fever provides the best example. The essential similarity with the other two is evident from the frequent description as "hay fever when there isn't any hay." The following accounts illustrate many of the features:—

Case 1. (Irregular rhinorrhœa.) In 1922 I operated on the left antrum and ethmoid of a lady who attended occasionally since that time for inspection. Her general health improved very much after the operation, and remained good, and she was a particularly active and energetic woman. She never had any symptoms or evidence of disease in the right side of the nose until early this year, when she was 68: one afternoon as she sat at home she felt a sudden tickling in the nose and before she could reach for a handkerchief clear watery fluid began to pour from the right nostril. The attack ceased in half an hour, but a second occurred a week later, followed by others at decreasing intervals but of increasing severity, until they were occurring almost every day, and even when in bed at night, irrespective of what she was doing or whether she was at home or not. Her only warning was a tickling sensation, immediately after which the nose began to pour; in addition there were severe fits of sneezing, the cheek, nose and eyelids swelled up, with frontal and right-sided headache, lachrymation and even photophobia, and the right side of the nose became absolutely blocked. She might soak a dozen handkerchiefs in rapid succession and even then have dealt with but a fraction of the discharge, which was described as absolutely clear water, imparting neither colour nor the least stiffness or manifest change to the handkerchief. The severe attacks lasted three to four hours, and were not relieved by her doctor's ministrations: the nasal obstruction and headache persisted long after the other symptoms, her upper lip became badly excoriated, and she was reduced to a physical and nervous wreck for days after, when the attacks left her for so long. No cause at all could be found to explain the sudden change: after the attack had ceased I could discover no evidence of any disease in the

right side of the nose, though the inferior turbinal was considerably more engorged than I had previously seen it: and except as compelled by the attacks she had not made any changes in her habits, diet or mode of life. Fortunately local treatment afforded complete and immediate relief.

Case 2. (Perennial rhinorrhœa.) I was consulted last September by a man of 32 complaining of "Hay fever every day for the last four months." He had never previously been affected and could think of no change in his work, habits or residence that might explain the condition: indeed, at first he had not worried much about it, regarding it as seasonal hay fever, until the persistence and increasing severity of the attacks brought him for advice. The attacks began with fits of severe sneezing lasting some minutes on end: they occurred always early in the day, and often actually woke him from sleep. After several sneezes the nose began to run clear water, and in a few minutes he might soak three or four handkerchiefs: the fluid did not mark these at all, but left them very slightly stiff. The later attacks lasted about an hour, leaving the nose obstructed most of the day. I found considerable swelling of the inferior turbinals but no other clinical or X-ray evidence of anything abnormal. Such a train of events always makes one suspect a new feather pillow, domestic pet or similar source of disturbance, but I have not been able to discover any such factor here.

SYMPTOMS.

The symptoms shew great variations in relative intensity from case to case, but much less between the attacks which affect any one patient: they tend to become more severe in the later attacks.

Irritation is specially prominent in hay-fever, in which the patient may be conscious of a pricking sensation in eyes and nose for a day or two *before* the real attack begins. In all types it tends to increase during the early part of the attack. It may spread to the pharynx and larynx, causing great discomfort and a persistent, harsh, barking cough, usually without any visible changes in the larynx.

Sneezing is occasionally so severe as by itself to

render the patient completely prostrate. There may be frequent paroxysms, or uncontrollable sneezing may continue for as much as an hour.

The discharge is always watery, never thick or purulent. It may literally pour from the nose: as much as six pints in a single attack has been recorded. Though very often apparently perfectly limpid, if examined in bulk it is faintly straw-coloured or opalescent, being in fact a very dilute mucus. It is faintly alkaline, and has the characteristic odour of mucus. Even when the mucin it contains is insufficient to stiffen a handkerchief, a chemical test (dilute acetic acid) shews it readily, and on heating the fluid we get a cloudiness due to coagulated albumen. It does not reduce Fehling's solution, a test which distinguishes it from the cerebrospinal fluid that drips from the nose in the rare and quite unrelated condition of cerebrospinal rhinorrhœa. It is usually sterile but contains many epithelial and eosinophile cells. Though it may appear quite innocuous, it is capable of causing very uncomfortable excoriation of nostrils and upper lip.

Swelling of the cheeks and eyelids may be extreme. I am inclined to regard the condition known as "Spasmodic Palpebral Œdema of Ethmoiditis" as merely a variant of the disorder under discussion, in which the œdema of the eyelids, often so severe as to close the eyes completely, is the prominent feature.

Asthma occurs in some cases, usually as the nasal symptoms subside; but it may replace the latter as the years follow on. It has been contended that it is caused by direct action of the exciting agent on the bronchi. The time factor suggests that the agent is not inhaled, but it might be conveyed by the circulation after absorption in the nose. The point is not

important: there are many cases on record of asthma without any nasal symptoms, relieved by purely local treatment of the nose.

General.—Even with hay fever there is no real fever, or at most a very insignificant rise of temperature. But many patients experience a sense of physical and mental prostration after the attack out of all proportion to its severity. Bad temper and irritability are a phase of this.

Examination.—If one examines a patient during or just after an attack, the nose may present nothing abnormal beyond very pronounced swelling of the inferior turbinal. The latter is pale grey or violet in colour, sodden, flabby and usually in contact with the septum. It shrinks very poorly on the application of cocaine solution. When the attack has passed off the nose may appear absolutely normal, even in those who have been victims for years. But in some cases, though the appearance is normal, stroking the head of the inferior turbinal or the septum opposite the middle turbinal, which in normal persons would provoke merely sneezing and lachrymation, may suffice to start a typical attack. On the other hand, in those who have suffered long one frequently finds persistent pale hypertrophy of the inferior turbinal: perhaps less frequently polypi or other clinical or X-ray evidence of sinus disease, especially in the ethmoid. It used to be said that spasmodic rhinorrhœa might be for years the only symptom of latent sinusitis that eventually became manifest: I prefer the view that spasmodic rhinorrhœa may of itself initiate all the changes described. Septal spurs or irregularities may have some influence by making specially sensitive areas prominent, but they seem no more common in those who suffer from rhinorrhœa than in the

population as a whole, and I believe are only occasionally significant.

ÆTIOLOGY.

When the attacks are determined by personal idiosyncrasy to a substance of wide distribution, as in hay fever, they generally make their first appearance in adolescence. It seems probable that in many cases the early attacks occur in childhood but are relatively mild and apt to be overlooked: I have encountered a number of children under seven who suffered from typical seasonal hay fever. There is a well recognized tendency for the attacks to cease in later years. When they first appear at this period there is probably some additional factor to account for the development of susceptibility. In a few cases at any age a patient previously immune dates the commencement of his troubles to some illness such as influenza.

Among the factors that may induce an attack, we can recognize one or more of the following:—

(*a*) Local (nasal) supersensitiveness:
   1. General.
   2. Specific.

(*b*) An external exciting cause:
   1. *Specific: e.g.*, vegetable—pollen, orris-root; animal—emanation, food or extract.
   2. *Non-Specific:* dusts, vapours, cold, light, etc.

(*c*) Personal factors.
   1. Family tendency, illness.
   2. Habits—food, drink, toilet-preparations, medicines, occupation, etc.
   3. Endocrine.
   4. Nervous.

Supersensitiveness. General supersensitiveness of

the nose, including the association with local abnormalities, has already been mentioned. Specific supersensitiveness is well illustrated in the case of hay fever, in which it is often the only factor of importance. In this country most havoc is caused by the grass pollens, which appear from the middle of May till July, the recognized "Hay Fever Season." Occasionally we encounter patients with an idiosyncrasy for trees such as the poplar, elm, etc., which flower in March, and in America the September-flowering docks are great offenders. The pollen of all these is wind-borne and often travels long distances, so that a susceptible person may be affected in the heart of a big city or even a mile or more out at sea. Certain conditions are necessary: on a cold day pollination does not take place, on a perfectly calm day the pollen is not distributed, heavy rain will wash the atmosphere clean, and of course a breeze directly off the sea is free from pollen. What are commonly called flowers, such as roses, are insect-fertilized, and their heavy pollen granules travel only short distances: the patients can therefore easily detect and avoid the cause of their trouble.

Flower pollens may appear in articles of diet. I have met with a patient, susceptible to rose-pollen, in whom attacks followed eating honey, probably collected from garden flowers, though he was not affected by really pure heather honey. I suspect too that the attacks ascribed to free indulgence in wine are due not to the alcohol but to the grape, though not to its pollen: but I admit chronic alcoholic excess as a cause of nasal turgescence. Another vegetable substance that is a frequent offender is orris-root, a component of many toilet powders: the more the patient sneezes the more often she must powder her

nose and so start fresh paroxysms. Many articles of food have a definite seasonal appearance and attacks due to these may pass as hay fever. Other sources of trouble that may be difficult to detect are animal emanations, especially from feathers in pillows, bed-covers, etc. Some examples of idiosyncrasy will be given later.

Non-specific irritants are apt to be overlooked unless the time of the attacks points them out. Any irritant dust or vapour may start an attack. Quite recently I saw a man who had had to change his occupation because the irritation of powdered corundum used in grinding started severe spasms of sneezing and rhinorrhœa. He came to me because, after a period of freedom, his employers had set up a forge near his bench and the fumes brought a recurrence of his symptoms. In this case I think a very pronounced deviation of the septum is a factor of importance and I propose to see whether treatment of this will relieve him. Tobacco workers seem often affected, but only the "strippers" who work in an atmosphere made irritating by the dust of the raw untreated leaves: once the tobacco has been "cut" (*i.e.* steeped in alcohol) in the process of manufacture there is little trouble. It is a pity that the use of respirators where indicated in industry is not more general. Sometimes of course the stimulus is not nasal: typical attacks may follow exposure to bright sunlight, the sudden contact of the feet on a cold floor in the morning, or a draught of cold air—in the last case of course the patient insists that he has "caught a cold."

The possible influence of personal habits, occupation, diet, etc., has already been indicated. I should like to enquire how far the use of gas-fires is a factor

of importance: in several cases I have thought it material.

Medicines may cause trouble. The effect of iodides on the nose is well known, but that of thyroid gland is not always appreciated. Cough mixtures containing terpene or similar substances affect many persons. The local application of drugs to the nose appears to be increasing. I have encountered many cases in which the nose became extremely sensitive following the prolonged use of Benzedrine inhalations, or irritating, useless disinfectant sprays and douches; and of late years the application of ephedrine in oil has become a positive family vice in many households.

Endocrine System.—The connection between the endocrine system and the nose has long been recognized. Patients taking large doses of thyroid gland may get quite severe rhinorrhœa; and the local application of adrenaline will produce a smart attack in many otherwise normal persons. Recently œstrogen has been used to increase nasal secretion in cases of atrophy. The association of sexual excitement with rhinorrhœa has been observed since the time of Trousseau, but appears to have attracted less attention than it merits. There are a few unfortunate men in whom every sexual excitement occasions a severe attack of rhinorrhœa. I have never met with such a case myself, but minor symptoms in males appear to be not uncommon. In women the premenstrual period is often accompanied by nasal irritability, at times amounting to troublesome rhinorrhœa. They are said, however, to be less often affected in this manner by sexual excitement. "Honeymoon catarrh" seems to be fairly frequent, but only rarely mars this felicitous period sufficiently to necessitate medical advice: not until I was going through my cases for this paper did

it strike me that three of the four cases I had seen, all quite severe, had occurred in the summer though the patients had never had hay fever.

Nervous Causes.—The influence of mental and nervous conditions is often very definite. It reaches perhaps its extreme form in those patients who, susceptible to the pollen of a particular flower, may suffer an attack on the sight of a similar artificial flower. Though this may be rare, it is common to find a patient who uses his disability to excite compassion or interest: the phrases "my hay-fever" or "my catarrh" frequently indicate an attitude of mind which requires treatment as much as the physical troubles.

Sometimes, of course, several factors combine. Thus in one patient of mine, in whom hay fever began with the menopause, not the endocrine change but thyroid medication for "slimming" was what determined the onset. In two tobacco-strippers symptoms were only really troublesome just before each period, though they never occurred except in connection with work.

DIAGNOSIS.

In many cases the history of previous attacks, seasonal periodicity or association with some particular food or occupation enables the patient to make the diagnosis himself. It is the minor, atypical attacks or those occurring in winter that may be difficult. The watery, eosinophile character of the discharge and the absence of fever should prevent mistakes, and intradermal testing with extracts of suspected substances may confirm the diagnosis. Often, however, we shall fail to discover what actually does determine the attacks.

Perhaps* the coincidence of first onset with an

* *Lancet*, 1931. Vol. 2, p. 1237.

illness, change of residence or of occupation, supplies a valuable clue to the ætiology. But in other cases, although the periodicity or other circumstances point strongly to an occupational cause, the connection is quite obscure; the attacks pursue the patient from one occupation or residence to another. Again, there may be no material change in occupation to account for the sudden appearance of attacks; in these cases the patient is prone to ascribe them to shock, overwork, or nervous strain, recognizing clearly the "nervous" element in the causation. Before proceeding to dermal testing and desensitization, or even to operation, it is worth while to spend time in a careful investigation of the circumstances and of the mode of life of the patient. This may elicit some apparently trivial clue, on pursuing which the case becomes "Quite simple, my dear Watson!"

Case 3.—Miss A., aged 28, came to me in June, 1927, complaining of sneezing attacks, associated with intense watery nasal discharge, irritation, and watering of the eyes; and during about a year nocturnal asthma, often sufficiently severe to wake her up. The attacks came on at any time of the day, and throughout the year, though they were worse in sunny weather. They had started four years' previously, and had at first been ascribed to hay-fever. She lived with her widowed mother, who kept a village shop. I inquired about animals; they had had a cat and had kept poultry "for years"; she did not think these could be concerned, for when she stayed with a sister who also had fowls she was quite free. Her own view was that the extra work entailed in looking after the shop and nursing her mother during a severe illness in the spring of 1923 had brought on the attacks. The nose appeared quite normal, but she had waited for a day when the attacks were better to come in to see me. Further questioning showed that from the time of her mother's illness she had taken over a large part of the domestic work, including feeding the fowls, collecting eggs, and cleaning the fowl-house. She agreed to get someone else to do this, and

finding the attacks disappeared, gave up keeping poultry with complete relief.

Case 4.—Mr. C., aged 45, came to me in September, 1931, complaining of severe attacks of sneezing followed by intense nose-running, coming on every Sunday morning; by the evening he was almost prostrated, and felt very unwell all next day. The attacks had been going on for thirteen years, during which time he had been an ironmonger and a lorry driver in the North of England, later a gardener in Bristol, and now a cemetery attendant. He had now to work on Sundays occasionally, and the attacks came on as regularly then; the only time he was free was when he was in camp with the Territorials at the seaside—an inland camp did not help. Employers did not like a man who was always ill on Mondays, so he had become a teetotaller, except during the time when he was in camp. I wondered if beer was a cure, but he had had the same idea and given the suggestion sufficient trial to convince him of its futility. He nearly always spent his Saturday afternoons in his own garden; flowers would not be in season all the year round, but could it be bone manure? No, for the attacks came on even when he had not been in the garden. He had no dog, and had only had a cat for four years. The attacks started before church-time, so incense could not be blamed. The only difference from ordinary routine that applied to Sunday was that he got up two hours later, hardly a sufficient explanation. However, this supplied the clue; on Sunday he cooked himself a hot breakfast of bacon, on other days he had tea and cold food. I advised him to give up his bacon, a plan from which he was averse, for he was very fond of it, and it never gave him indigestion. He left me in much the same mood as Naaman the Syrian after his first visit to Elisha. Like Naaman, however, he resolved to give the simple prescription a trial. A month later I had a letter apologizing for not coming to see me again, "as it was quite unnecessary; I have not had another attack."

Case 5.—Miss B., aged 25, a wholesale chemist's assistant, came to me on 18th September, 1928, complaining of constant colds and violent sneezing attacks—"my nose simply pours." The attacks began rather suddenly nine months before, and she thought they must be due to intensive study for her final pharmaceutical examination, which she had passed in October, 1927; she had been working in the same dispensary for five

years. The attacks were clearly connected with her work, as they never started on Sunday nor when she was on holiday. The obvious advice was to abandon her profession, but as usual this was not practical politics; also, she had been dispensing for some years without trouble. Further questions elicited that the attacks usually came on about 4 p.m. and often lasted over the next day, seldom longer. They tended to be most frequent on Tuesdays and Fridays. The nose on examination appeared to be quite normal. The only clue to explain why the work she had done for so long without trouble should suddenly become noxious was the passing of the examination! That is to say, she was now fully qualified, and employed in handling poisons, including "dangerous drugs," which had formerly not been part of her work. Tuesdays and Fridays were the days when "stocks" of these drugs were usually made up. Cocaine did not affect her. I advised that she should try leaving off the handling of opium and its derivatives, to which her employer agreed. For a month she was quite free from attacks. Further experiment showed that she could handle opium, extract of opium, tinctura opii, or liquor morphinae without suffering; but whenever she had to put up powdered morphine sulphate or tartrate the attacks followed. Wearing a mask did a little to mitigate the distress. The only attacks she had after this could be directly traced to handling these drugs, usually when other dispensers were on holiday. When she left her employment to get married she remained entirely free from rhinorrhæa. There was a sequel to this case when four years later her employers asked her to work for them again because several of their staff were ill. This time it was necessary for her to do all the regular routine work and for the six weeks during which she was employed she suffered from her customary attacks whenever she handled morphine.

TREATMENT.

In a limited number of cases it may be possible to detect and avoid the cause of the paroxysms. When this is almost universal, as in hay fever, avoiding it may entail a sea voyage or residence abroad, which few can afford. A more modern method is air-conditioning of sitting-room or office, a relatively

inexpensive method. Now that the whole population is provided with gas masks it might be worth while to don one of these before the attack begins—one could hardly do so later. The great majority of patients want the shortest and simplest treatment that will enable them to live and to work as usual. As has been suggested, to obtain a good result it may be necessary to investigate and deal with a number of factors including diet, furniture and habits of life. And when, as in the first two cases I mentioned, it is impossible to discover any clue to the cause, prophylactic or specific treatment is impossible.

General Measures.—It is not my purpose to discuss general measures that should be adopted when a patient is first seen during an attack. It is wise to avoid both cocaine and adrenaline applications to the nose, the first on account of the danger of habit-formation, which is very definite in patients of this type, the second because the temporary relief is soon followed by an exacerbation of symptoms. A weak solution of cocaine alkaloid (not hydrochloride) in almond oil is not open to the same objections, as absorption is so slow that oxidation and excretion keep pace with it; alternatively a watery solution of tutocaine may be used: in either case a very small addition of ephedrine is permissible. But even a plain, bland oil spray has definite value. In hay fever bathing the eyes with a weak alkaline eye lotion is often comforting: it may be necessary to confine the patient to a room in which the window is closed so as to minimize exposure to pollen and severe photophobia may render darkness desirable. No medicines appear to have any specific effect, but bromides afford some measure of relief. Some patients find benefit from full doses of calcium by mouth.

Desensitization.—The first attempts at specific treatment were made with serum obtained from animals inoculated with various pollens. This method never received much success. Inoculation of the patient himself has a very definite value, especially in dealing with true seasonal hay fever. It is less useful where the patient reacts to numerous animal extracts, dusts and articles of food, etc. We must recognize that often we have to deal with patients who are "reactive" generally rather than particularly susceptible to one substance: they may give a vigorous skin reaction to almost every substance that is applied in the intra-dermal test; others of course give no reaction with any. The favourable patients are those who react to grass pollens, etc., but not to other substances. There is a certain amount of cross-sensitivity: that is, patients who are sensitive to one grass pollen may give dermal reactions with others. This is particularly noticeable in the Dock-Ragwort-Golden-Rod class that causes so much havoc in America.

For good results it is desirable to employ a large number of pollens and to make up for the patient a special vaccine from the information thus obtained. Stock preparations give good results in a much smaller proportion of cases. Treatment is best begun in the early part of the year well before attacks are to be expected. Beginning with very small doses, these are very cautiously increased at intervals of two or three days. Some thirty injections in all are required to reach an adequate dose without provoking reactions, and once this dose has been obtained it is continued, usually once a week, until the end of six months from the start and then once a month for a further eighteen months. Though this method is tedious, it is often

successful even in cases of great severity. Desensitization can be applied when an attack is starting by carrying out inoculations every two hours, but requires special care in these circumstances. Anaphylactic shock is a possibility with any method of desensitization.

Local Treatment.—Obvious nasal abnormalities will naturally receive attention. Many of these patients suffer from disease of the sinuses, treatment of which is essential to a good result. Beyond this, local measures are designed to reduce the sensitivity of the nose, in the logical expectation of aborting the paroxysms. As a matter of interest, may I be allowed a glance at the history of some of these ?

The hardy Victorians sprayed or painted the interior of the nose with chemical caustics, employing strong solutions of mercury biniodide or perchloride, trichloracetic acid or silver nitrate. There is no question that these measures were usually successful, but morphine was always required for the intense pain, and unfortunately the sense of smell might be impaired or lost.

It was perhaps the desire for milder methods that inspired the procedures of Gottstein and of Zückerkandl towards the end of the last century. Gottstein's tamponade consists in the application of wool or gauze, variously impregnated, between the septum and the middle turbinal, intentionally avoiding the lower part of the nose. I remember how much time I spent when clinical assistant at the Golden Square Throat Hospital, just after the war, on this procedure. It is now called the "ethmoid pack." Zückerkandl practised massage, particularly of the inferior turbinal, with a rubber tube: rechristened

"diastolization," the method was revived some fifteen years ago.

Nasal ionization has had a still more chequered career. A standard textbook published in the early nineties mentions cataphoresis as a procedure which was losing support. About 1910 it came again into favour, but failed to survive the war. You will all remember the boom it enjoyed two years ago, largely, I believe, from the favourable notice of one of our large newspapers; special clinics were even established for its administration. It is of course only a particular method of chemical cauterization, embellished with the mystery surrounding anything electric. Under local anæsthesia the olfactory cleft is carefully packed with tampons moistened with 1 per cent. zinc sulphate solution or jelly, surrounding zinc anodes: and a current of 5 milliampères is passed for five to fifteen minutes. However careful one is, it is very difficult to obtain in every case a coagulation uniform both in area and degree. Two or three sessions may be necessary and further courses may be required in subsequent years. Although there is no pain during application the immediate after-effects are extremely unpleasant: but a good result is sufficient compensation. Recent figures from a centre where large numbers are treated claim 18 per cent. cured and 45 per cent. improved: my own much smaller experience is considerably better than this.

The galvanic cautery has consistently maintained its reputation for fifty years. It can be applied very simply and accurately. The aim is to cauterize as lightly as possible the sensitive region, especially the septal crest, and as the local damage is very slight the reactions are minimal. The method has long enjoyed a reputation in the treatment of asthma

(unrelated to rhinorrhœa). Although it has often been said that the results are due to suggestion, they are at least as good as those of more elaborate or uncomfortable methods. The lady whose case I mentioned at the beginning of this paper was cauterized once, and although very sceptical was gratified by the complete cessation of her symptoms. It is one of the simplest and least unpleasant of the local measures and will probably continue in favour: the only drawback is that a certain degree of skill and experience are requisite for good results—too extensive or deep cauterization must be avoided.

Summary of Treatment.

1. During attack: local and general sedatives, calcium.

2. Prophylaxis:
   (*a*) avoid cause if known;
   (*b*) desensitization with vaccines, particularly in hay fever;
   (*c*) treat nasal disorders, especially sinusitis (often unsuspected);
   (*d*) local desensitization: actual cautery very lightly applied to special areas; in obstinate cases, despite difficulties and discomfort chemical coagulation (including ionization) often succeeds.

THE SEBORRHŒIC DERMATOSES.*

BY

NORMAN BURGESS, M.D., M.R.C.P.

Physician-in-Charge, Skin Department, Bristol General Hospital;
Clinical Lecturer in Diseases of the Skin, University of Bristol.

THE seborrhœic dermatoses are the commonest skin diseases for which we are consulted and yet some confusion still exists concerning their classification and nomenclature. As is usually the case in Dermatology many names have at various times been given to the same condition, and this has not tended to clarify the position. My object in this paper is to discuss the relationship of the diseases commonly called "seborrhœic" to each other, to describe clearly their clinical appearances, and to consider their ætiology and treatment; nomenclature I regard as only of secondary importance.

In the first place we must consider what we mean by seborrhœa. This term means an exaggerated sebaceous secretion which does not usually become noticeable until puberty, and which may take one of two forms:—

1. *Fatty seborrhœa* characterized by dilatation of the pores and the accumulation of sebum in the follicular canals. This material can be squeezed out

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of the dilated pores and if examined under the microscope is seen to consist of fat droplets, horny cells and large numbers of the organism described by Sabouraud as the microbacillus of seborrhœa, and by Unna as the acne bacillus.

2. *Oily seborrhœa*, which usually co-exists with the fatty type, is characterized by a greasy and shiny appearance of the skin. Fatty seborrhœa is most marked on the centre of the face, the sides of the nose and the nasogenial grooves; oily seborrhœa is seen on the face, scalp and chest. Great confusion has been caused by the extension of the term seborrhœa to cover all the manifestations, of which it is only one, of a more general condition called by Darier "kerosis" and generally known in this country as "the seborrhœic state."

The seborrhœic state is characterized by a dirty yellowish or greyish colour of the skin, which is slightly thickened, and an accentuation of the pilo-sebaceous pores. It is most marked on the centre of the face, *i.e.* the forehead, nose and chin, on the scalp, temples, nape of the neck, mid-line of chest and back, the pubes, intergluteal folds and the large articular folds. Seborrhœa usually becomes added to this picture at puberty. Barber has pointed out that this condition is accompanied by a low resistance of the skin and mucous membranes to pyogenic organisms, the acne bacillus and the pityrosporon of Malassez, intolerance to excess of carbohydrates, an abnormal tendency to eczematization, and in severe cases hyperacidity of the urine, a high ammonia ratio and a high tolerance for alkalis. To this Ingram has added functional instability of the skin with reference to its secretory functions, hypersensitivity to irritants both internal and external, and vaso-motor instability. Heredity, a

sedentary life, lack of exposure to sun and air, endocrine disturbances, faulty diet and constipation all seem to be factors of importance. The importance of the seborrhœic state is that it is the background on which appear pityriasis capitis (dandruff), and some forms of alopecia, seborrhœic dermatitis, acne, rosacea, sycosis and seborrhœic warts.

Darier has shown that the appearance of these diseases is related to the age and sexual development of the individual. Pityriasis simplex or dry dandruff may appear at 6–11 years and may change at puberty to pityriasis oleosa or oily dandruff; acne vulgaris is most marked at 15–25 years; loss of hair may begin at 25 or earlier; rosacea is rare before the third decade, while seborrhœic keratoses do not appear until late middle-age. It is these conditions, differing widely in appearance, which we regard as the seborrhœic dermatoses which we are to consider in this paper.

The treatment of the seborrhœic state, so far as it is treatable, follows from what I have already said about the condition. The patient should have a low carbohydrate diet, digestive disturbances and constipation should be treated, moderate exercise, the wearing of light clothing and exposure of the body to air and sun should be encouraged, and in severe cases large doses of alkalis sufficient to make the urine alkaline to phenolphthalein should be given.

To summarize what I have said so far, there is a dystrophy of the skin and mucous membranes associated with hyperacidity of the urine, intolerance of carbohydrates and a high tolerance for alkalis, known as the seborrhœic state. At puberty this skin dystrophy usually becomes complicated by seborrhœa,

an excessive secretion of the sebaceous glands. The seborrhœic state and seborrhœa itself are predisposing factors in the production of certain infective diseases of the skin. It is the type of soil common to all these skin conditions which constitutes the link between them, a fact brought home to us clinically by the appearance of these various skin diseases at different times in the life of the same individual. I now propose to describe and to discuss the diseases associated with the seborrhœic state.

Pityriasis capitis.

One of the earliest and commonest conditions occurring in subjects of the seborrhœic state is pityriasis of the scalp. This may appear from 6 to 11 years as dry scales which fall readily and are constantly renewed. These scales are full of a yeast-like organism known as the pityrosporon of Malassez. After a few years this dry dandruff may change to a greasy form, in which a coccus described by Unna as the morococcus is associated with the pityrosporon. This greasy dandruff may in turn change into a greasy, non-scurfy state; the scales disappear and an oily secretion is seen to be coming from the pilo-sebaceous follicles and from the sweat pores. This is true seborrhœa of the scalp in which the microbacilli of Sabouraud are found. True seborrhœa of the scalp very frequently leads to early baldness which in men follows a definite pattern. At first there is loss of hair on each side of the frontal region, leaving a central tuft. This tuft becomes isolated by loss of hair posterior to it and the tuft itself is eventually lost: at the same time hair begins to be lost on the vertex. Eventually these bald areas join up and the patient is left with a fringe of hair only at the sides of the head and the occiput.

In women, however, seborrhœa only leads to diffuse loss of hair and complete baldness does not result, except in rare cases associated with endocrine dysfunction. Sabouraud believed that these conditions are caused by the micro-organisms with which they are associated, but recognized that their growth and the order of their appearance seem to depend on sexual evolution. Although in a severe case going on to premature baldness the course of events is that which I have described, it must be realized that the dry or greasy forms of dandruff may be found at any age.

For the dry form an ointment containing 30 per cent. of oil of cade should be rubbed into the scalp on one or two nights a week and the head washed on the following days, while in the greasy type 3 per cent. of sulphur should be added to this ointment. As alternatives, either a spirit lotion containing perchloride of mercury and salicylic acid, or a 3 per cent. sulphur and salicylic ointment, may be used. In adults, particularly in stout middle-aged men, there is a danger of eczematization and the amount of sulphur and oil of cade should be halved. If any redness appears these drugs should be still further reduced, and the head washed with yolk of egg instead of soap.

Quite apart from the importance of treatment to the individual concerned, dandruff should always be treated because of the possibility of infecting others. This is particularly important in the case of those having charge of small babies, for it frequently happens, as was emphasized by my predecessor at the Bristol General Hospital, Dr. Kenneth Wills, that a baby becomes infected by its parent or nurse and develops an infective type of infantile eczema. Dandruff must

be distinguished in adults from psoriasis of the scalp. Patches of psoriasis have sharply circumscribed edges, while dandruff, if it does not involve the whole scalp, has indefinite edges; lesions of psoriasis are usually present elsewhere on the body, and can usually be distinguished quite easily from the patches of seborrhœic dermatitis which may accompany dandruff.

Seborrhœic Dermatitis.

Associated with pityriasis capitis, but occasionally in its absence, we may find certain skin conditions which differ greatly from each other in appearance, but which have all, at various times and by different persons, been called seborrhœic dermatitis. I suggest that we should use the name "seborrhœic dermatitis" as a generic term to cover all those dermatoses. The first group of eruptions to be included are composed of erythemato-squamous spots or circumscribed patches. Darier regarded these lesions as akin to eczema because one can observe imperceptible transitions from one to another and because the histological appearances are almost identical.

He thought, however, that they could be differentiated from eczema because of their usual dryness, their sharply marked, rounded or polycyclic borders, and the fact that they can persist unchanged for a long period but can be readily cured by local treatment. To these lesions he gave the name "*eczematides*," of which there are two main types, the figured and the pityriasiform.

Figured Eczematides.

This condition is found in the mid-line of the chest and back, but may extend more or less from the mid-line. It may also be seen on the scalp, forehead, temples and retro-auricular regions. It consists of

more or less numerous petaloid or polycyclic spots or patches with sharp margins, reddish, elevated borders, covered with greasy yellowish scales and crusts which are thicker at the periphery of the patch than at the centre. The patches tend to spread at the margins and to heal at the centres; in the advancing zone outlying follicular papules may be found. This type of eczematide, in association with greasy dandruff involving the scalp, eyebrows and moustache, constituted the seborrhœic eczema of Unna. Duhring called it seborrhœa corporis, and it has also been known as the flannel-rash. The treatment of figured eczematide is simple and successful; the scalp should be treated as I have already described, while a 3 per cent. sulphur and salicyclic acid ointment should be rubbed into the patches daily.

Pityriasiform Eczematides.

The appearances of these lesions are less constant than those of the figured type. They consist of round, oval or irregular fawn-coloured spots or patches covered with fine scales. They occur most commonly on the scalp, neck, trunk and articular folds. There may be some difficulty in diagnosing the condition from pityriasis rosea; the latter disease, however, begins with a herald patch which precedes the generalized eruption by several days, spares the articular folds and neck, and only involves the upper thirds of the arms and thighs. The treatment consists of the application of 1 per cent. sulphur or ichthyol in calamine lotion or zinc cream. I have also found intravenous injections of thiostab useful in these cases. The work of Dowling and Macleod, and later that of Moore, Kile and Engman, suggests very strongly that the eczematides are due to infection with yeast-like

organisms, especially the pityrosporon of Malassez, which are usually saprophytic but which may develop varying degrees of pathogenicity under certain conditions.

Acute Seborrhœic Dermatitis.

The term seborrhœic dermatitis or seborrhœic eczema has also been applied to more acute conditions. The scalp, previously affected by dandruff, may suddenly become red and swollen, after which profuse weeping may occur. The condition usually extends to the backs of the ears and the face, eyebrows and eyelashes. In some cases the condition remains limited to the scalp and face and may become chronic. The disease may rapidly spread to the neck, axillæ, antecubital fossæ, umbilicus, groins, intergluteal fold, popliteal spaces and in women under the breasts. These patches are red and slightly scaly, and outlying follicular papules are present. In many cases weeping occurs in a short time. The spread of the disease in these cases is usually so rapid that it would seem that it is through the blood-stream. In these cases staphylococci and streptococci may be recovered from the lesion, but it is not possible to reproduce the disease by inoculation of these organisms; it would seem therefore that the skin in these cases is sensitized to these organisms.

There has been much discussion as to the origin of this condition; some believe that it is primarily a streptococcal dermatitis originating in a retro-auricular streptococcal fissure, while others believe that the streptococcal infection is secondary to a pityriasiform eczematide affecting the articular folds. I believe that both conditions may occur and that in the fully developed state it may be difficult to differentiate

between them. A week or so ago I saw two cases in my clinic which demonstrated the difference between these conditions. The first case was a man with well-marked seborrhœic state and greasy dandruff. He had developed in a few days acute red, dry, slightly scaly patches with outlying follicular papules affecting the backs of the ears, sides of the neck, axillæ, antecubital fossæ, umbilicus, groin, intergluteal folds and popliteal spaces. Without treatment this patient would, in a few days, probably have had weeping patches in these situations. The other patient was a woman with slight dandruff. She had had a discharging ear for some time, and had suddenly developed acute weeping crusted patches behind and on the ears, in the axillæ, antecubital fossæ, under the breasts, in the groin and in the popliteal spaces. In this case, however, there were no outlying follicular papules, and the edges of the lesions were sharply demarcated and slightly crusted. The first case I regarded as acute seborrhœic dermatitis of the flexures ; the second as acute flexural streptococcal dermatitis. The treatment of acute seborrhœic dermatitis requires great caution as the skin is hypersensitive to irritants.

In addition to the usual treatment of the seborrhœic state, alkalies in very large doses should be given and should be pushed until the urine is alkaline to phenolphthalein. The patient should be kept in bed and intravenous injections of Thiostab should be given. If the scalp is weeping a collosol sulphur lotion should be applied daily ; if there is much crusting and oozing of the scalp alibour water should be used. When weeping has ceased either weak coal tar or weak sulphur ointments should be applied and the head washed with yolk of egg. Chronic fissures behind the ears should be painted with a

2 per cent. solution of silver nitrate and fractional doses of X-rays given. In the flexural cases, if no weeping is present, small doses of X-rays are beneficial ; the affected parts should be cleaned with liquid paraffin and one-half per cent. sulphur or one per cent. ichthyol in calamine lotion applied. Later weak tar ointments may be used. If weeping has occurred wet dressings of lead lotion or one-half per cent. silver nitrate should be ordered.

Seborrhœic Sycosis.

I have referred already to the fact that acute seborrhœic dermatitis of the scalp may pass into a chronic condition which is usually associated with fissures behind the ears and chronic blepharitis. The condition may also involve the beard and moustache area, where a sycotic pustular folliculitis is superimposed upon the erythematous dermatitis. In many cases the eyebrows are also affected by this sycotic process.

Ingram has stressed the association of this form of sycosis with the seborrhœic state and other seborrhœic dermatoses, and has shown that it is to be differentiated from ordinary coccal sycosis which affects the beard *or* the upper lip, but rarely both. In the seborrhœic type both beard *and* upper lip are involved. These cases are almost invariably associated with focal infection in the nose, throat or mouth.

The importance of the treatment of focal infection was well shown in a case which I published in the *British Journal of Dermatology and Syphilis* in 1938. I was consulted in July, 1937, by a young man aged 21 years, suffering from severe seborrhœic sycosis, involving the beard, moustache and eyebrows ; this

was associated with chronic red glazed seborrhœic dermatitis of the scalp, retro-auricular fissures and blepharitis. He told me that he had suffered from the condition since the age of 14 years, and that on account of his revolting appearance he had never been able to obtain employment. He had had much local treatment at other hospitals, and on one occasion had been temporarily epilated with X-rays with only transient benefit. I asked Mr. John Wright to see him, and on his advice tonsillectomy was performed. He was also given local treatment and intradermal injections of a stock sycosis vaccine. Within a month of his first visit he had recovered sufficiently to obtain employment. He has been continuously in employment since then, and apart from occasional slight blepharitis has remained free from any eruption. In my opinion the rapid improvement and cure must be attributed to the removal of the focus of infection.

I propose now to discuss two conditions which are associated with seborrhœa itself.

Acne Vulgaris.

This disease usually makes its appearance at puberty; it affects the face, back and chest, one or more of these parts being involved. In addition to seborrhœa, blackheads and pustules are present on the affected parts, and in most cases there is dandruff of the scalp. The seborrhœic state is well marked. The blackhead or comedo can be squeezed out of the pilo-sebaceous follicle, and is seen to be a small horny cylinder, the exposed end of which is black as the result of oxidation of the keratin. In the cavity containing it may be found imprisoned sebum and acne bacilli

in large numbers. The pustules are the result of infection of the follicles with staphylococci. Acne is most marked between 15 and 25 years and tends to disappear in the late twenties; it is, however, important to treat it early in order to avoid scarring. The condition is frequently worse at the menstrual periods, and in many cases there is irregularity of menstruation. The condition is also affected by diet; excess of carbohydrates, pig-meat and cheese usually make the disease worse.

The objects of treatment are to reduce the sebaceous secretion and to change its constitution, in order to diminish and render less "palatable" the medium on which the organisms flourish. The first objective may be attained by the use of sulphur lotions applied night and morning after washing, or much more effectively by the administration of fractional doses of X-rays. In order to change the constitution of the sebum, a low carbohydrate diet should be ordered, and the patient instructed to avoid bacon, pork and cheese. Anæmia, menstrual irregularity, constipation and focal infections in nose, throat or teeth should be treated. Finally, comedones should be expressed and pustules opened regularly, while dandruff should be treated.

Rosacea occurs most commonly in middle-life, but in rare cases may occur earlier. In its fully developed stage, the centre of the forehead, the nose, the cheeks and the chin are permanently flushed, and dilated capillaries or telangiectases are seen on these parts; there are papules and pustules on the flushed areas, and dandruff is usually present on the scalp. The first essential for the production of the condition is an unstable vaso-motor system which probably accounts for the frequency of the condition at the

menopause. The condition usually begins with frequent flushing of the face as a result of drinking hot drinks or alcohol or from eating highly-seasoned food. It has been found that a large percentage of persons suffering from rosacea have either hypochlorhydria or achlorhydria, while 95 per cent. suffer from some digestive disturbance. In some, nasal infection is present. The condition may, however, result from constant exposure to cold winds.

Rosacea may be distinguished from acne by the age of the patient, the erythematous nature of the eruption and the absence of comedones.

The treatment of the condition consists of :—

1. Correction of diet.
2. Administration of hydrochloric acid.
3. The application of one per cent. ichthyol in calamine lotion night and morning.
4. Treatment of nasal infection if present.
5. Avoidance of cold winds.
6. Very small doses of X-rays are sometimes helpful.
7. Dilated vessels may be treated by electrolysis after the other signs have disappeared.

With the approach of old age the severity of the conditions associated with the seborrhœic state declines and the last manifestation is the appearance of so-called seborrhœic warts. These are flat, brownish-grey keratoses which occur chiefly on the chest, back and abdomen. They sometimes cause considerable irritation, and may in rare cases become malignant. They are best destroyed by touching them with the galvano-cautery under novocaine anæsthesia and then removing them with a curette.

SUMMARY.

On the background of the seborrhœic state we see the following dermatoses :—

1. Pityriasis capitis and infective eczematides.
2. Acute infective dermatitis of the scalp and flexures.
3. Pustular dermatitis on the areas covered with strong hairs.
4. Acne vulgaris.
5. Rosacea.
6. Seborrhœic warts.

The successful treatment of these conditions depends on the treatment of the underlying seborrhœic state in addition to appropriate local treatment.

Reviews of Books

The Surgery of Pain. By R. LERICHE, M.D., LL.D. F.R.C.S. Pp. xx., 512. London: Baillière, Tindall & Cox 1939. Price 21s.—Anything contributed by this eminent Strasbourg surgeon is always fresh, stimulating and based on a wide and very specialized experience. He writes that we have been far too obsessed by the idea of the sensory nerves in thinking about pain. The conception of the physiologists is too mechanical, too purely artificial. There are other factors. Men of some nations, for instance certain Russians and many Asiatics, can tolerate amputation with scarcely any evidence of pain; to those of other races a needle-prick may be intolerable. Vasomotor changes, especially vasoconstriction, greatly increase pain. Division of the sensory root of the Gasserian ganglion is eminently successful in the treatment of neuralgia, but most peripheral neurotomies are failures; the pain sooner or later recurs. Leriche has given up cordotomy, posterior radiotomy and peripheral neurotomies for this reason. The kind of pain he is interested in appears to be independent of the anatomical distribution of the nerves or of nerve roots. Even amputations do not stop it. He believes that such pains travel by the sympathetic system and by the nerves on the arteries. Frequently pain is evoked by the sympathetic without being conducted by it, by producing in the sensory nerve-endings a state of vasoconstriction or of vasodilatation. Pain may also be due to calcium deprivation; the acute agony seen in certain cases of tetany is at once abolished by an injection of calcium. For post-traumatic spreading neuralgia, following, it may be, a trivial injury but leading to pain all over the limb, nerve sections, amputations or periarterial sympathectomy are useless. The proper treatment is, in early cases, novocain injections into the painful area and along the sensory nerves supplying it. Daily injections may be called for. In more extensive cases, novocainization of the stellate and two upper thoracic ganglia on one or two occasions may relieve. Stellectomy does not give much relief. For painful amputation or wound neurogliomata

on nerve-trunks, a long excision of the injured nerve should be made and a nerve-graft applied to the cut end. Causalgia (the " burning pain ") is associated with atrophy of the skin, which the patient often insists on keeping wet ; it may follow a partial section of a nerve, or there may be no nerve injury. It is a form of excessive vasomotor reaction to an injury. In early cases, novocainization of the scar and of the stellate ganglion may suffice to cure ; if not, a high periarterial sympathectomy, *e.g.* on the axillary artery, will probably succeed. If an artery has been wounded it should be excised ; if a nerve, the damaged portion should be excised and the gap sutured or nerve-grafted, in addition to the sympathectomy. Painful neuromata in amputation stumps must not be treated by neurectomy, alcohol injections, or re-amputation, but by novocainization of the paravertebral sympathetic or perhaps a ganglionectomy. The " terrible disease " sclerodermia can be cured by parathyroidectomy plus an operation on the sympathetic. Juvenile arteritis is to be treated either by adrenalectomy or by lumbar ganglionectomy. " All cases of angina pectoris should be operated on in the absence of contra-indications." The best treatment is removal of the left stellate ganglion. Leriche lost none of his twenty-seven cases, but not all were cured.

The Medical Press and Circular, 1839-1939. Editor: R. J. ROWLETTE, M.D., F.R.C.P.I. Pp. x., 127. Illustrated. London : The Medical Press and Circular. 1939.—The recent celebration by the *Medical Press and Circular* of its first appearance as the *Dublin Medical Press* in 1839 is a matter of great interest in English Medical Journalism. Few other medical papers can point to continuous publication over as long as a century. This extremely interesting record affords us a full account of the development and progress of the paper, especially during its first thirty years before amalgamating the *Dublin Medical Circular*. It is illustrated by a number of reproductions of covers and of portraits of Editors.

British Medical Societies. Edited by Sir D'ARCY POWER, K.B.E., F.R.C.S. Pp. xvi., 312. Illustrated. London : Messrs. Baillière, Tindall & Cox. 1939. Price 10s. 6d.— A better title might have been " Some Medical Societies," for, as the Editor himself points out, the list of those noticed is by no means exhaustive, and indeed it is difficult to discover

whether any principle guided the selection of the thirty-four societies that do appear. For these include the Society of Apothecaries, a number of Hospital Societies such as Guy's, the Listerian and the Middlesex; amalgamations such as the British Medical Association, the Royal Society of Medicine and the Royal Academy of Medicine in Ireland; some special groups, for example the Ophthalmological, Pathological and Anatomical and, in another class, the Research Defence Society and the Association of Surgeons; and finally a considerable number of the type that is most likely to be suggested by the title, the Medical Society of London, the Hunterian Society, the Edinburgh, York, Manchester, Ulster, and so forth. It is not clear why one Society such as the Cardiff is chosen and another such as our own is omitted. Although naturally the accounts given of the various Societies are very brief, they are with one or two exceptions extremely interesting and informative, particularly in the light thrown on medical habits and modes of thought in earlier times.

Recollections of Student Life and Later Days. By C. J. BOND, C.M.G., F.R.C.S. Pp. 47. London: H. K. Lewis & Co. Ltd. 1939. Price 1s.—This is a charming account of the closely associated lives of two great men: of Horsley, the bold thinker, fearless operator and tireless fighter, who died all too soon on "active service" in every sense of the word: and of the modest and retiring Bond of Leicester, the naturalist, philosopher and surgeon, who witnessed and shared in so many of Horsley's triumphs. The two made early acquaintance as students at University College and this ripened into closer friendship as the years rolled by. Horsley's various interests in cerebral surgery, anæsthetics, archæology and sociology are briefly described, and a warm tribute paid to him as a friend and companion. Bond's own interests in parasitology, cardiac physiology, heredity, zoology and botany show what a wide scientific outlook he had, and make it possible to realize how close was the intimacy between these two great men.

Genetics and the Clinician. By L. RIDE, M.A., B.M., B.Ch., M.R.C.S., L.R.C.P. Pp. xiv., 146. Bristol: John Wright & Sons Ltd. 1938. Price 10s. 6d.—This book, published so far afield as Hong Kong, represents a laudable attempt to present the basic facts of genetics and to indicate the fundamental importance of this rapidly growing branch of biology to the medical profession. It is, as the author

points out, very difficult in the crowded medical curriculum to find time for an adequate course on genetics. It therefore behoves the medical practitioner to obtain his knowledge after graduation, and he will find this volume most helpful. A clear account is given of Mendel's original work with the additions made by T. H. Morgan and his school owing to their discovery of "linkage" of genes on the chromosomes, the significance of which is made clear in a chapter devoted to the cytological basis of the mechanism of inheritance. The author then proceeds to the applications of genetics to medicine. Here the relative importance of genetic constitution and of environmental factors—intrinsic and extrinsic forces which interact the one on the other—are considered. Further knowledge on these lines will enable us eventually to formulate sound eugenic methods. The inheritance of specific human characters, both morphogical and physiological, leads the author to a statement on inheritance of serological characters, a subject on which he is an acknowledged authority and one in which knowledge is so exact that it may be applied with confidence to questions involving paternity and, in some cases, identity.

The Postnatal Development of the Human Cerebral Cortex. Vol. 1 : Cortex of the Newborn. By J. LEROY CONEL. Pp. viii., 114, iv. Illustrated. London : Oxford University Press (Humphrey Milford). 1939. Price 35s.—This excellent work emanates from the Department of Anatomy of the Boston University School of Medicine and the Department of Pathology of the Harvard Medical School in the Children's Hospital and the Infants' Hospital. The investigation, which is extremely thorough and of high scientific achievement, is intended to be a general survey of the postnatal development of the nerve cells in the normal human cerebral cortex for the purpose of observing what changes occur in the morphology of neurons as development in behaviour of the growing child proceeds. This, the first volume, deals only with the state of development of the neurons in the cerebral cortex of the new-born, *i.e.* the nine-months fœtus immediately after birth. With these objectives, the author has cut and examined many hundreds of microscopic sections of all the principal parts of the frontal, parietal, occipital, and temporal lobes, as well as of the insula and the rhinencephalon, and has passed his findings on to the reader in the form of nearly two hundred very admirable photomicrographs, which are so clear and beautifully reproduced as almost to excel their originals. Le Roy Conel has

thus done for the neo-cortex of the new-born brain what von Economo and Koskinas did for the adult neo-cortex in their *Die Cytoarchitekonik der Hirnrinde des erwachsenen Menschen* —a work of surpassing and magnificent opulence—and what, as recently reviewed in this *Journal*, Berry has done for the brain of the mental defective. These three works are thus complementary, and form a mutually dependent trilogy of permanent and undateable scientific value. That Conel's work is not, at the moment, of any great therapeutic interest to either the clinician or the psychologist in no way detracts from its high scientific achievement, for certainly no University Library or Medical School Department, particularly Anatomy, Histology, Physiology, and Neurology, can afford to be without one of the best and most up-to-date expositions of the neuronic construction of the new-born neo-cortex. To them the book can be strongly recommended.

Treatment in General Practice. Vol. III: Anæsthesia: Surgery. Articles republished from the *British Medical Journal*. Pp. xii., 402. Illustrated. London: H. K. Lewis & Co. Ltd. 1939. Price 10s. 6d.—This is the third of a series of volumes consisting of articles reprinted from the *British Medical Journal*, and contains forty-two sections, sixteen dealing with anæsthesia and twenty-six with surgery. The scope of the matter contained under each heading is such as may be expected to meet the requirements of the general practitioner, who will find that the various authors have been successful in selecting the most essential points in the topics dealt with. The two chapters by Hewer on the stages and signs and depth of anæsthesia for different operations are illustrative of the practical nature of these articles. Much interesting information is provided under "Analgesia in Midwifery" and other headings, such as "Pre- and Post-Operative Treatment" and "Risks of Anæsthesia." The portion of the volume devoted to surgery is full of useful references to recent methods, including such questions as the use and abuse of antiseptics, the treatment of scalds and burns, the giving of blood transfusion and of saline transfusion; and includes articles describing the methods for dealing with injuries of joints and muscles, lesions of the head, such as scalp wounds or concussion; affections of the eye, ear, nose and throat, and of the teeth. There are illustrations where necessary, and a good index is furnished: the typography is excellent.

Modern Treatment in General Practice Yearbook, 1939. Edited by C. P. G. WAKELEY, D.Sc., F.R.C.S., F.R.S.E. Pp. xii., 365. Illustrated. London: Baillière, Tindall & Cox. 1939. Price 12s. 6d.—The *Modern Treatment in General Practice Yearbook* for 1939 maintains the high standard of its predecessor, and in forty-eight articles deals with the modern views on a wide variety of medical and surgical problems. The drawings and photographs are beautifully reproduced and enhance its value; the typography is good. The chief criticism is the inclusion of articles with details of specialized surgical technique, *e.g.* the Technique of Splenectomy, which, in a book of this nature and scope, could have been usefully omitted in favour of contributions more within the sphere of the general practitioner for whom the work is primarily intended. The stimulating section on "Pitfalls in Diagnosis" could with advantage be enlarged. The book is a sound investment for those who are sufficiently interested in clinical medicine and surgery to keep abreast of modern views on these subjects.

Cancer: Causation, Prevention and Treatment. By A. E. BLACKBURN, M.D. Pp. viii., 111. Illustrated. London: H. K. Lewis & Co. Ltd. 1939. Price 6s.—The author of this work, an M.D. of Brussels, whose other claim to attention is that he was formerly a Vice-President of the Section of Medicine of the Royal Society of Medicine, has taken his text from the book of Leviticus, where the eating of any animal fat is prohibited; and seeks to persuade us that neglect of this prohibition is responsible for cancer, which he defines as "a vegetable, living parasitically on an animal and striking out roots as vegetables do." He writes of his "theory" and his "researches," though there is nothing worthy of either term in the whole book; which is indeed a mere hotch-potch of unsupported statements and vague speculations interspersed with quotations from any and every source that might be held to support the author's views or to lend a scientific air to the compilation. There are a few obvious misprints, but the value of this contribution to the study of cancer is so completely negligible that the absence of an index may be ignored.

Iodine and the Incidence of Goitre. By J. F. MCCLENDON. Pp. x., 126. London: Oxford University Press (Humphrey Milford). 1939. Price 22s. 6d.—This monograph contains an immense amount of information concerning the distribution of iodine in rocks, soil, plants and animals all over the world.

The labour involved in making these thousands of analyses must have been stupendous. The thyroid gland, and seaweeds, contain the richest stores of iodine in nature. Chili saltpetre and certain phosphatic rocks also hold high quantities. The middle section of the book indicates the distribution of goitre all over the world. Certain districts of Switzerland, and the Himalayas, give the highest figure. Only here and there does the author attempt to correlate the incidence of goitre with the amount of iodine available in the food and drink of a district, but in a general way more iodine goes with less goitre, and *vice versa*.

Rheumatism. By H. WARREN CROWE, D.M., B.Ch., M.R.C.S., L.R.C.P. Pp. xiv., 280. Illustrated. London: John Bale Medical Publications Ltd. 1939. Price 12s. 6d.—This volume is claimed to be for those who, wishing to treat the chronic rheumatic diseases (gout being excluded), will be interested in the theory underlying the most modern technical methods and its practical application as based on the special vaccine treatment of the Charterhouse Rheumatism Clinic. Evidence in the shape of not very convincing photographs, and of a differential sedimentation test, is submitted, but we are not converted. The usual sedimentation test which we relied on for well over ten years is decried, and the method substituted (but not explained) has not the support, to say the least, of all pathologists. The section on Orthopædics, X-ray treatment and Physiotherapy are very good: the book is well produced, printing, paper, illustrations (as illustrations), literary style, are all good. We take off our hats to Dr. Warren Crowe for describing on pages 168–9 the technique for an intrathecal injection and calling it an epidural one.

The Infant. Second Edition. By W. J. PEARSON, D.S.O., M.C., D.M., F.R.C.P., and A. G. WATKINS, M.D. Pp. viii., 56. London: H. K. Lewis & Co. Ltd. 1939. Price 2s. 6d.—When we reviewed the first edition of this book the absence of any advice on the protein-requirement of infants was adversely commented on. In 1939 the importance of adequate protein intake for infants is more generally appreciated than in 1932. On page 12 prominence is given to the caloric requirements of infants, and the caloric yield of protein is given. No word of advice is vouchsafed as to the amount of protein

recommended in the artificial feeding of infants. Even more surprising is the avoidance of the topic on page 9, where "modified cow's milk" is discussed and section (*b*) is devoted to "its protein content." The protein requirements of infants are not even mentioned. Analyses of many proprietary foods are given, but this does not atone for the outstanding omission. In the light of present-day knowledge it can scarcely be described now as "a reliable reference book."

Carbon Monoxide Asphyxia. By C. K. DRINKER, M.D., D.Sc. Pp. xx., 276. Illustrated. London: Oxford University Press (Humphrey Milford). 1939. Price 25s.—This valuable book is designed to give a practical account of carbon monoxide poisoning for the benefit of those who are concerned with the medical and legal aspects of the condition. The physiology and biochemistry of this form of asphyxia are treated with great clarity. A full account is given of the ætiology, signs, symptoms and diagnosis of acute and chronic monoxide poisoning. The chapter on chronic poisoning is particularly important, since it deals with the question of exposure of garage workers to the exhaust fumes of automobiles. The post-mortem findings in cases of acute poisoning are described adequately, but it is unfortunate that an increase of fluid in the ventricles of the brain is said to be a sign of cerebral œdema. There is an excellent chapter on the treatment of carbon monoxide poisoning, and the final section by Dr. J. Sendroy on the detection and quantitative estimation of carbon monoxide in the air and in the body is a valuable review of the methods available. The book is well illustrated by photographs and diagrams and there is an excellent bibliography which adds very greatly to its value for reference purposes. The index is full and well arranged.

Fractures and Dislocations. By J. HOSFORD, M.S., F.R.C.S. Pp. viii., 274. Illustrated. London: H. K. Lewis & Co. Ltd. 1939. Price 12s. 6d.—Within the modest figure of 262 pages, the author has admirably succeeded in covering the essential features and treatments of fractures and dislocations. One feels that perhaps in a subject lending itself so well to illustration by diagrams and photography, practical points in treatment might have been more clearly brought out by a greater use of illustrations. Many important practical points

which are not usually recognized are brought out. Some of these are the frequency of refracture in children with a fractured radius and ulna and the wise precaution of prolonging immobilization; the need for almost weekly check X-rays in many cases of fractures of both bones of the forearm to detect insidious slipping; the importance of displacement of the fragments and the need for reduction in many cases of fractures of the carpal scaphoid; and finally, the need for the flexed position in many cases of Colles's fracture. This compact book provides the reader with a well accepted treatment for almost all the fractures and dislocations with which he may be faced.

Clinical Electro-Surgery. By G. M. BLECH, G.C.S., G.C.G., M.D., LL.D. Pp. xxviii., 389. Illustrated. London: Oxford University Press (Humphrey Milford). 1939. Price 21s.—One of the Hippocratic aphorisms, probably of Hindu origin, says that "diseases not curable by iron are curable by fire." Much human suffering has resulted from this conception; the present volume is designed to show circumstances where it may, after all, be the truth. The virtues of electro-surgery are that the heat seals lymphatics and capillaries and so prevents the local dissemination of cancer cells; it reduces bleeding; reduces shock and post-operative pain; and promotes wound-healing, though skin sutures should be left in a few days longer than after scalpel incision. It is not claimed that it could be relied on to kill all bacteria in the wound. The main indications are for the purpose of removing malignant growths, for the opening of abscesses, for reducing bleeding when operating on a patient with the hæmorrhagic diathesis, and for sealing off the surface of the thyroid gland to prevent post-operative toxæmia. Bones, nerves and arteries must be avoided. It is better to make the skin incision with a scalpel. In his later chapters the author considers each part of the body *seriatim*, and discusses the very numerous conditions for which electro-surgery may be used. He makes a strong plea, for instance, for this method of operating for carbuncles, for cancer of the breast, and for epithelioma of the vulva. It is maintained that certain toxic goitres, where operative removal would be dangerous, may be exposed under local anæsthesia and treated by a combination of electro-coagulation and electro-excavation, and that this method is both safe and effectual.

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Studies on the Physiology of the Eye. Reissue. By J. G. BYRNE, M.D., LL.D. Pp. xiii., 440. Illustrated. London: H. K. Lewis & Co. Ltd. 1938. Price 40s.—This book is by a physiologist of international repute in research circles, whose investigations into the special senses have been predominantly in the realms of the eye and ear. With the exception of Part I —about a quarter of the book—which was published in *The American Journal of Physiology*, 1921–29, the experimental studies are here made public for the first time. The experiments on "the functions of the cervical sympathetic as manifested in its action currents" were carried out in collaboration with Professor Willem Einthoven at Leiden University, but apart from this the whole work is the product of the author's own thought and labour. The purpose of the book is to trace the evolution of the multiple and highly complex ocular effector mechanisms in their different stages. The author describes at length the widening and narrowing of the palpebral fissure and the pupil, proptosis and retraction of the eye, and changes in the curvature of the lens. The various reflexes are meticulously divided into component parts, some of which the keen student can easily test for himself, such as preliminary dilatation of the pupil before contraction to light, a phenomenon which has been recorded by flash-lamp photography. An attempt has been made to give clinical significance where possible to the many phenomena elaborated, the keynote of the whole work being the interaction of the parasympathetic and sympathetic impulses and their relation to peripheral nerve stimuli. There is a very interesting section on sleep, hibernation, and the "still reaction" (death-feigning, etc.), and the influence of psychic elements is discussed. So much of the work is pioneer that comparisons and estimations of worth are difficult. But the author's work in London, Paris, Hamburg, Madrid and other university centres has always commanded attention, and his reasoning is impressive. This is an excellent book, but its appeal will be mainly to the physiological research worker and to those clinicians, especially ophthalmic, who delight in profound knowledge for its own sake.

The Physiology of Anesthesia. By H. K. BEECHER, A.M., M.D. Pp. xiv., 388. New York: Oxford University Press. 1938. Price 17s. 6d.—Dr. Beecher has produced a valuable digest of many of the experimental data referring to anæsthesia which have been published during the past fifty years by workers in various countries, especially in the United States,

Canada and Europe. The response of the body to anæsthetic agents presents such a wide field for investigation, that the author is to be congratulated on the clear account he has given of the various phenomena involved. To all who are interested in the practice or study of anæsthesia this book will prove invaluable. All aspects of the subject have been considered, with especial attention to the action of the newer drugs and to controversial topics. In the section dealing with the action of local anæsthetics upon various tissues an account is given of recent experiments carried out to determine the factors controlling the level to which spinal anæsthesia will extend: in this connection the occasional occurrence of unaccountable variations makes it obvious that further information is necessary in order to avoid accidents. Throughout the book Dr. Beecher has devoted most attention to such topics as require further clinical consideration. Under the functional effect of anæsthesia upon respiration and circulation there are explanations of many phenomena with which the clinician is only too familiar. But among the organic changes produced by anæsthetics are some effects which may easily be overlooked, as, for instance, the anæmia following repeated Evipan anæsthetics in dogs; also the damage to the liver in certain cases. The book is beautifully produced, and the references are up to date and will be helpful for research workers and clinicians. A good index is included.

Gould's Pocket Medical Dictonary. Eleventh Edition. Edited by C. V. Brownlow. Pp. viii., 1066. London: H. K. Lewis & Co. Ltd. 1939. Price 10s. 6d.—Those readers who are familiar with Gould's *Pocket Medical Dictionary* will welcome this new edition. It contains one outstanding improvement: all words with *prefixes*, *suffixes* and all the *phobias* are now placed in the appendix; so, too, are the tables of arteries, bones, muscles and nerves, and various other important posological, chemical and bacteriological tables. In some future edition a table of veins will no doubt be included. Arteries are important, of course, in anatomy examinations, but in clinical medicine the veins begin to matter. Another possible improvement would be the collecting of "signs" into the appendix, or even all personal names. Gould's *Pocket Medical Dictionary* has a well-deserved world-wide reputation.

Editorial Notes

Opening of Barrow Hospital.

On 3rd May the new Barrow Hospital, built by the Visiting Committee of the Bristol Mental Hospital was opened by the Chairman of the Board of Control, Sir Laurence Brock, C.B. The need for additional accommodation for mental patients had been realized for many years, until at last a site was purchased at Barrow Gurney, and the City Council, on 10th October, 1933, approved the scheme for building the new hospital. The site lies only five miles from the centre of the city in a woodland area, picturesquely named "The Wild Country." The plans for the hospital were prepared by Sir George Oatley in consultation with the Board of Control and Dr. E. Barton White, who was at that time Medical Superintendent of the Bristol Mental Hospital. By kind permission of the Chairman, Alderman Mrs. Pheysey, J.P., and the members of the Visiting Committee, part of Dr. Barton White's description of the new hospital is quoted from the booklet published for the opening ceremony :—

Since the time of Hippocrates, history reveals only sporadic attempts at breaking away from superstition in the treatment of disease affecting the mind until comparatively recent times, and it was not until during the French Revolution that certain reforms were introduced both in this country and in France.

Early in the nineteenth century there were two outstanding instances in this country of advances in the methods of treatment and nursing which have since been followed by

the majority, and many of these reforms have since become compulsory by law. Space prohibits giving here the full history of progress made in Bristol, but records dating from 1840 refer to the "pens" and the "yard" attached to St. Peter's Hospital, that picturesque old building in the centre of the city, where the "yard," or small exercising ground, was protected from the harbour by spiked railings.

The hospital at Fishponds was built in 1860 for some two hundred patients with occasional extensions up to one thousand and forty-five by the year 1908, but by 1935 the number resident had exceeded eleven hundred, coincident with the growth of the city. In 1932 a modern Nurses' Home and a Medical Officer's House were completed, and in February of the same year the Home and Out-patient Clinic at Grove Road received its first patient.

Most of the older hospitals still in use were built like large barracks, under one roof, and though comfortable in some respects, they provided little relief to those sensitive to their environment, a problem now recognized as so important a part of successful treatment, and there were no adequate means for proper classification. This became well nigh impossible with increasing numbers and it was difficult to carry out any form of treatment.

To those who have spent many years amongst their patients it became evident that hospitals built on the villa system, breaking away from the institution atmosphere, are essential for the realisation of satisfactory results, where the environment is peaceful and conducive to rest and contentment, and where there is full scope for proper classification. Several such hospitals now exist, and the opportunity to provide these conditions arose in Bristol when additional accommodation became necessary owing to the increasing population and consequent rise in the number of admissions to the hospital at Fishponds.

The principle upon which this hospital was conceived is that the Admission Centre is the first part of the hospital to be approached on entering the estate.

In this Admission and Treatment Centre the early and acute phase of the illness is dealt with in all its aspects and full investigations are made and recorded. When considered well enough, patients are passed on to the Convalescent Villas and further to the Parole Villas. From any of these units patients may be discharged upon recovery, while the well-equipped Sick Hospital provides treatment for those suffering from any intercurrent bodily illness at any time during their stay.

There are facilities for all forms of occupation therapy, and, as in most hospitals of this kind, provision is made for Farm buildings, and there is both horticultural and agricultural land upon which patients can be usefully employed with benefit to themselves.

The whole lay-out is so arranged that most of the buildings are well screened from one another, and the Architect is to be congratulated upon the effect produced.

The project is intended for an ultimate total of 1,150 patients. Its execution has been divided into stages. The initial buildings accommodate 375 patients with Residential Quarters for medical and other officers and nurses.

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Burden Neurological Institute.

ON 12th May Sir Thomas Inskip, Secretary of State for the Dominions, inaugurated the Burden Neurological Institute, the latest of the many benefactions of Mrs. R. G. Burden, of Clevedon Hall, and Warden of Stoke Park Colony.

Sir Laurence Brock, C.B., Chairman of the Board of Control, who is also Chairman of the Committee of Management of the new Neurological Institute, presided at the ceremony, at which the donor, Mrs. Burden, was present.

This Institute is the most recent development of a series of activities associated with Mrs. Burden and her husband. It is not directly concerned with mental deficiency, and although it is situated in Stoke Park it does not form part of the colony for mental defectives which has been so long established there. The Director of the Institute is Dr. F. L. Golla, who was associated with the late Sir Victor Horsley and Sir F. W. Mott. Since Mott's death, and for a short time previously, he has been Director of the Central Pathological Laboratory of the London County Council. The Institute is to receive financial assistance from the Rockefeller

Foundation in America and the Medical Research Council in Britain. The purpose and aim of the Institute was described in the *Western Daily Press* of 12th May, as being to undertake an intensive study of the chemical and physical processes of the body in certain nervous mental disorders with special concentration on epilepsy.

The immediate task of the Institute will be to investigate a few carefully selected cases by every form of bio-chemical, electro-physiological and endocrinological method.

Of Dr. Golla's fitness to direct these studies there can be no doubt, and we welcome him as a colleague as warmly as we do the foundation of the Burden Neurological Institute.

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Colston Research Society.

THE Thirty-Fifth Annual Dinner of the Colston Research Society was held on 25th May. The guest of the evening was Mr. Joseph P. Kennedy, the American Ambassador, whose health was proposed by Mr. Winston Churchill, the Chancellor of the University. A matter of great regret was the absence, through illness, of the President, Mr. Foster G. Robinson. The immediate Past President, Mr. R. J. Sinclair, presided in his place. Nearly 400 guests attended the dinner, and, in the words of the Vice-Chancellor, "it was the most distinguished night in the history of the Society." The collection was announced as £781 14s. 6d. A particularly gratifying consequence of the large attendance was the addition of forty-five new names to the Society's subscription list, which augurs well for the future.

Meetings of Societies

Bristol Medico-Chirurgical Society.

SIXTY-SIXTH SESSION, 1938–1939.

THE fourth meeting of the Session was held in the Physics Lecture Theatre, Royal Fort, on Wednesday, 11th January, 1939, at 8.30 p.m.

Dr. Leonard Moore was in the Chair, and sixty-nine members were present.

Mr. F. Willway showed skiagrams illustrating intracranial lesions and method for investigation and localization, and Dr. C. H. G. Price showed pathological specimens.

Professor Gilbert Strachan gave a very practical paper dealing with **"Obstetrical Emergencies."** A lively discussion followed in which Dr. Leonard Moore, Professor Smythe, Dr. Phillips and Mr. Nicholson Lailey took part, and Professor Strachan replied to the questions.

The fifth meeting of the session was held in the Physics Lecture Theatre, Royal Fort, on Wednesday, 8th February, 1939, at 8.30 p.m.

Dr. Leonard Moore was in the Chair, and 106 members were present.

Dr. Bergin showed skiagrams, and Professor Hewer showed pathological specimens.

Mr. W. Heneage Ogilvie gave a lecture entitled **"Recent Advances in Surgery,"** distinguishing clearly between what is merely "recent" and what is truly an "advance." Professor Rendle Short proposed, and Mr. Adams seconded a vote of thanks to Mr. Ogilvie for his very helpful survey of many branches of surgery.

The sixth meeting of the session was held in the Physics Lecture Theatre, Royal Fort, on Wednesday, 8th March, 1939, at 8.30 p.m.

Dr. Leonard Moore was in the Chair, and forty-four members were present.

Dr. Bush showed skiagrams, and Dr. Fraser showed pathological specimens.

Mr. Anthony Palin then gave an address on "**Some Recent Advances in Ophthalmology,**" with special reference to the use of contact glasses, and to orthoptics in the treatment of squint. He showed a number of very interesting exhibits illustrating different types of work which ophthalmic surgery now embraces.

Mr. Ramsay Garden, and Mr. Coote took part in a discussion, and Mr. Palin replied to the questions.

The seventh meeting of the session was held in the Physics Lecture Theatre, Royal Fort, on Wednesday, 12th April, 1939, at 8.30 p.m.

Dr. Leonard Moore was in the Chair and sixty-two members were present.

Dr. A. L. Taylor showed pathological specimens, and Dr. Bush showed a short cine film illustrating a new radiographic method whereby different depths in the body were brought successfully into focus, in a series of X-ray photographs.

Dr. Bush explained the process and showed many very interesting examples of the value of this new method.

Dr. Nixon then read a paper on "**Diet in Pregnancy and Lactation.**" Mr. Shepherd, Professor Smythe, Mr. Palin, Dr. Phillips, Dr. Kemm and Dr. Richard Clarke took part in the discussion which followed, and Professor Nixon replied to questions raised.

Dr. Beryl Corner then read a paper on "**Some Aspects of Bronchography as an aid to the Diagnosis of Intrathoracic Disease,**" and showed a film which she had produced. The film showed the technique and the uses of this method of investigation. Dr. Beryl Corner also showed an excellent series of bronchographs which she had made of cases coming under her care.

Dr. Bush asked questions and Dr. Beryl Corner replied.

British Medical Association.

Bath, Bristol and Somerset Branch.

EIGHT meetings were held under the able presidency of Mr. Hubert Chitty. In his inaugural address the President gave his audience a most interesting account of his experiences in a number of tuberculous conditions that he had encountered during his many years of active surgical work, and this was illustrated with many excellent lantern slides. Papers were also given in Bristol by Mr. A. L. Eyre-Brook, who dealt with his recent visit to orthopædic hospitals in the U.S.A., and by Dr. A. W. Spence, who gave an account of recent advances in hormone therapy. The annual clinical meeting was held at the General Hospital. The attendance of both patients and practitioners was greatly impeded by the inclemency of the weather, as it snowed hard during the afternoon and evening of the day selected. At Bath, Dr. Barnes Burt gave a paper upon "**The Causation and Treatment of Brachial Neuritis.**" Dr. Wyllie also visited the Branch at Bath and read a paper upon "**The Diagnosis in Pyrexia of Obscure Origin in Children.**" Dr. Reginald Miller lectured at Taunton on the subject of the "**Medical Appendix,**" which produced a most interesting discussion : and at Weston-super-Mare, Dr. Norman Burgess gave an address upon "**The Seborrhoeic Dermatoses,**" published in this issue.

Officers for 1939–40.—President, Dr. G. McLeod ; Vice-Presidents, Mr. Hubert Chitty, F.R.C.S., Dr. A. J. H. Iles ; Treasurer, Dr. F. J. Gomez ; Secretary, Dr. C. H. G. Price.

The Medical Library of the University of Bristol

WITH WHICH IS INCORPORATED

The Library of the Bristol Medico-Chirurgical Society.

The following donations have been received since the publication of the list in March, 1939.

	June, 1939.
American Laryngological Association (1) ..	2 volumes.
American Laryngological, Otological and Rhinological Society (2)	1 volume.
American Otological Society (3)	2 volumes.

Professor E. W. Hey Groves (4)	6 volumes.
London County Council (5)	5 volumes.
London School of Hygiene and Tropical Medicine (6)	1 volume.
Michell Clarke Fund (7)	28 volumes.
Nitrate Corporation of Chile Ltd. (8) ..	1 volume.
North Devon Athenæum (9)	6 volumes.
H. Stuart Thompson, Esq. (10)	1 volume.
Mr. E. Watson Williams (11)	25 volumes.

Unbound periodicals have also been received from Dr. R. F. Barbour, Professor E. W. Hey Groves, Dr. T. Milling, Professor C. Bruce Perry, Dr. G. de M. Rudolf, Dr. J. Odery Symes and Mr. E. Watson-Williams.

THE ONE HUNDRED AND SIXTY-SEVENTH LIST OF BOOKS.

The figures in round brackets refer to the figures after the names of the donors. The books to which no such figures have been attached have either been bought from the Library Fund or received through the *Journal*.

Abernethy, J.	*Physiological Lectures*		(9)	1825
Bechterew, W. von...	*Die Leitungsbahnen im Gehirn und Rückenmark*	2nd Ed.	(11)	1899
Beecher, H. K. ..	*The Physiology of Anesthesia*			1938
Berkeley, Sir C., and others.	*The Abnormal in Obstetrics* ..		(7)	1938
Blackburn, A. E. ..	*Cancer, Causation, Prevention and Treatment*			1939
Blech, G. M.	*Clinical Electro-Surgery*			1938
Boyd, W.	*Textbook of Pathology*	3rd Ed.	(7)	1938
Bramwell, B.	*Diseases of the Spinal Cord*		(11)	1882
Brend, W. A.	*Traumatic Mental Disorders in Courts of Law*		(7)	1938
Brown, O. R.	*Asthma*		(11)	1917
Brumpt, E.	*Précis de Parasitologie*	4th Ed.	(6)	1929
Byrne, J. Grandson ..	*Studies on the Physiology of the Eye*			1938
Cabot, R. C., and Adams, F. D.	*Physical Diagnosis*	12th Ed.	(7)	1939
Cameron, S. J. (ed.)	*A Glasgow Manual of Obstetrics*	3rd Ed.	(7)	1939
Carrel, A., and Lindbergh, C. A.	*The Culture of Organs*		(7)	1939
A Collection of all the papers relative to the alleged Adulteration of the Cheltenham Waters				1820
Collis, W. R. F. (ed.)	*Clinical Pædiatrics. (The Baby)* ..		(7)	1938
Conel, J. Leroy ..	*The Postnatal Development of the Human Cerebral Cortex*, Vol. I.			1939
Cullen, W.	*First Lines on the Practice of Physic*, 4 Vols.	New Ed.	(9)	1790
Davis, L.	*Surgeon Extraordinary*		(7)	1938
Dawkins, C. J. M. ..	*On the Incidence of Anæsthetic Complications and their Relations to Basal Narcosis* ..		(11)	1936

Edridge-Green, F. W.	*Memory, its Logical Relations and Cultivation* .. .. (11)		1888
Findlay, G. M.	*Recent advances in Chemotherapy*	2nd Ed. (7)	1939
Fisher, A. G. T. ..	*Treatment by Manipulation*	3rd Ed. (4)	1939
Flack, M., and Hill, L.	*A Text-book of Physiology* .. .. .. (11)		1919
Flexner, S.	*The Evolution and Organization of the University Clinic*		1939
Garel, J.	*Diagnostic et Traitement des Maladies du nez*	3rd Ed. (11)	1910
Gib, C.	*Vocal Science and Art* .. .. (11)		1911
Glaister, J.	*Medical Jurisprudence and Toxicology*	6th Ed. (7)	1938
Gordinier, H. C. ..	*The Gross and Minute Anatomy of the Central Nervous System* .. .. (11)		1900
Hadfield, G., and Garrod, L. P.	*Recent advances in Pathology*	3rd Ed. (7)	1938
Hall, F. de Havilland.	*Diseases of Nose and Throat* .. .. (11)		1894
Handfield-Jones, R. M., and Porritt, A. E.	*The Essentials of Modern Surgery* .. .. (7)		1938
Harrison, G. A. ..	*Chemical Methods in Clinical Medicine*	2nd Ed. (7)	1937
Harrower, H. R. ..	*Manual of Pluriglandular Therapy* .. (11)		1924
Hellner, Hans	*Unfall und Knochengeschwulst* .. .. (4)		1939
Herman, L.	*The Practice of Urology* .. .. .. (7)		1938
Hill, Sir L., and Ellman, P.	*The Rheumatic Diseases* .. .. (7)		1938
Hosford, J.	*Fractures and Dislocations in General Practice*		1939
Hulbert, H. H. ..	*Breathing for Voice Production* .. .. (11)		1903
Jamieson, W. A. ..	*Diseases of the Skin* .. .. 2nd Ed. (11)		1889
Johnston, T. B. ..	*Gray's Anatomy* .. .. .. 27th Ed. (7)		1938
Knaus, H.	*Periodic Fertility and Sterlity in Woman* ..		1934
Lake, R.	*International Directory of Laryngologists and Otologists* .. .. 2nd Ed. (11)		1901
Langley, J. N.	*Practical Histology* .. .. (11)		1901
Leriche, R.	*The Surgery of Pain*		1939
Lilly, Eli., and Co. ..	*The Anemias* .. .. (11)		1938
Loeb, H. W.	*Operative Surgery of the Nose, Throat and Ear.* 2 Vols. .. .. (11)		1914
McClendon, J. F. ..	*Iodine and the Incidence of Goiter*		1939
MacLeod, A. C. ..	*Some Radium Cases at the Middlesex Hospital* .. .. (11)		1931
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Publications Received

From Messrs. Edward Arnold & Co.:

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Genetics and the Clinician. By Lindsay Ride, M.A., B.M., B.Ch., M.R.C.S., L.R.C.P. Price 10s. 6d.

Local Medical Notes

The twenty-eighth Long Fox Memorial Lecture will be delivered at the University on Tuesday, November 14th, 1939, by Dr. Clement C. Chesterman. Subject "Forest Folk: Modern Medicine in the Congo."

APPOINTMENTS.

Bristol Royal Infirmary and Bristol General Hospital (Amalgamated).—Honorary Anæsthetists: H. B. Logan, M.R.C.S., L.R.C.P., D.A.; E. G. Bradbeer, M.R.C.S., L.R.C.P., D.A. Honorary Assistant Obstetrician: W. M. Capper, M.B., B.S. (Lond.), F.R.C.S. (Eng.), M.R.C.O.G.

Bristol General Hospital.—Honorary Consulting Surgeon: C. A. Moore, M.S. (Lond.), F.R.C.S. (Eng.); Honorary Consulting Anæsthetist: C. Corfield, M.D. (Durh.), D.A., Barrister-at-Law.

Bristol Royal Infirmary.—Honorary Consulting Anæsthetist: L. A. Moore, M.B., Ch.B. (Brist.).

EXAMINATION RESULTS.

University of Bristol.—Students of the University have recently passed the following examinations:—

M.D.—Constance I. Ham, E. Philipp (by dissertation).

M.B., Ch.B.—*First Examination. Pass:* J. A. Ardis, R. I. Bodman, A. M. Brown, Nina Dawson-Reid, Marjorie J. Dix, Margaret P. Drew, Julia Fraser, E. C. Hamlyn, Kathleen C. Iles, Flavia Z. L. B. James, D. M. M. Jones, M. H. Kerby, Josephine C. Mulcahy, M. J. Mulcahy, W. Oldham, D. V. Pleasant, C. T. Ross, R. J. Sandry, P. A. Titterton, A. S. Wallace.

M.B., Ch.B.—*Second Examination. Pass:* Nancy R. Baldwin, R. F. Brooks, Rosalie M. Child, D. G. Davies, J. Deighton, Mary D. Dixon, G. F. M. Hall, Elisabeth Hodson, A. G. H. Mitchinson, E. W. Moore, J. L. Pardoe, E. S. Short, N. Slade, M. H. Thomas, G. H. Valentine, Jean Wallace, G. H. Wattley.

M.B., Ch.B.—*Final Examination.* (*Section I.*) *Pass:* Marjorie Dainton, Joan M. Foss, J. E. Smith.

M.B., CH.B.—*Final Examination. Pass* (*with Second Class Honours*): Dorothy M. Shotton (2, 3), C. A. St. Hill (2). *Pass:* Dorothy M. Ayre, P. A. Bennett, A. A. K. Datta, Marjorie O. Dunster (1), J. L. Elliott, J. L. Emery, Emily G. Hamlyn, Betty F. Hannaford (1, 2), Monica L. Hawkins, F. R. Hurford, N. E. Melling, Jeannette D. Shed (2), S. J. Silvey, P. R. H. Slade, Sylvia E. Smith, T. H. White.

B.D.S.—*First Examination. Pass:* Jean A. M. C. Gordon-Ralph, R. D. Hepburn, Alice B. U. Leigh, R. L. Yendall.

B.D.S.—*Second Examination. Pass:* C. H. Gurd, F. G. Lloyd, F. M. Warren.

B.D.S.—*Third Examination. Pass:* F. C. Bryant, P. B. Carey, Margaret J. Griffith, G. K. G. Jennings (4, 5), Sarah Jones, P. M. Nicholas (4), R. M. Sharp.

B.D.S.—*Final Examination. Pass:* G. H. Bell (6), J. E. H. Bell, J. F. Blenkinsop, R. J. Gething, A. A. Grant (1), D. R. Stevens.

L.D.S.—*First Examination. Pass:* J. W. B. Kay, B. A. Oliver.

L.D.S.—*Second Examination. Pass:* G. E. Barnard, Patricia M. Burke, G. G. Davis, I. E. Perry.

L.D.S.—*Third Examination. Pass:* Jean M. Bryant, D. H. Buckland, R. L. Hollington, G. J. Mills, B. N. Neilson, R. S. Saxton, V. T. Scard.

L.D.S.—*Final Examination. Pass:* F. W. Clift, K. A. Gordon-Ralph, G. H. Hudson, E. L. Manton, R. H. G. Sims, Mary E. Thomas, May A. Trump, L. N. Weale, H. D. Williams, E. S. Wolfson.

(1) With Distinction in Surgery. (2) With Distinction in Public Health.
(3) With Distinction in Forensic Medicine and Toxicology.
(4) With Distinction in Dental Mechanics and Properties of Metals.
(5) With Distinction in Dental Anatomy.
(6) With Distinction in Dental Pathology and Bacteriology.

Conjoint Board.—L.R.C.P., M.R.C.S.—*First Examination* (Pharmacology and Materia Medica). *Pass:* Joan M. Foss, C. J. R. Jacob, J. H. G. Morris.

L.R.C.P., M.R.C.S.—*Final Examination. Pass:* A. L. T. Beddoe (8), Betty Fox (8, 9), F. R Hurford (9), Megan E. Jones (10), Joyce S. Miller (9, 10), Mary R. More (9), A. A. Stonehill (7, 9), E. W. J. Townsend (10).

L.D.S., R.C.S.— *Part I.:* S. G. Sheffield.

L.D.S., R.C.S.—*First Professional Examination. Pass:* R. M. Sharp (Dental Mechanics and Dental Metallurgy).

(7) Medicine. (8) Surgery. (9) Midwifery. (10) Pathology.